

**UPGRADATION OF INTEGRATED ASSETS MANAGEMENT AND URBAN PROPERTY
OWNERSHIP RECORD BUILDING**

Grand Summary

Sr. No.	Description	Cost In INR
1	Civil Work	3,15,74,240
2	UG Tank Civil Work	4,36,164
3	Landscaping Work	2,99,838
4	Electrical Work	29,45,636
5	Fire Alarm System	2,95,882
6	Public Address System	75,254
7	Fire Fighting Work	23,940
8	Plumbing Work	7,27,049
9	HVAC Work	9,53,093
	Construction Cost Sub Total	3,73,31,096
	GST @ 12% on Construction Cost(Electrical Cost Excluded)	41,26,255
	Electrical Work O and M (2 Years)	68,325
	Fire Fighting Work O and M (2 Years)	18,000
	Plumbing Work O and M (2 Years)	48,000
	HVAC Work O and M Cost (2 Years)	75,000
	GST @12% on O and M Cost (Excluding Electrical Cost)	16,920
	Escalation and Tender Premium @10%	37,33,110
	Add 3% Contengency	11,19,933
	Miscellaneous and Rounding off	63,361
	Grand Total	4,66,00,000

**EXECUTIVE ENGINEER
MSCL MANGALURU**

**GENERAL MANAGER TECHNICAL
MSCL MANGALURU**

MANAGING DIRECTOR

MASTER BOQ of URBAN						
Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks
1.00	KSRRB M200-11.1. Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned, including removal and disposal of top organic soil not exceeding 150 mm in thickness complete as per specifications and as directed by engineer in charge. II. By Mechanical Means: A. In area of light jungle. MORTH Specification No. 201 (KPWD 18-19,Sl.No.18.15)	Ha	1.22	20378.60	24,862	
2.00	KSRRB M200-12.1. Dismantling of existing structures like culverts, bridges, retaining walls and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts complete as per specifications and as directed by engineer in charge. i) Lime /Cement Concrete. I. By Manual Means: A. Lime Concrete, cement concrete grade M-10 and below. MORTH Specification No. 202 (KPWD 18-19,Sl.No.18.17)	Cum	10.00	499.40	4,994	
3.00	KSRRB M200-15.1. Dismantling of existing structures like culverts, bridges, retaining walls and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts complete as per specifications and as directed by engineer in charge. iii) Dismantling Stone Masonry. MORTH Specification No. 202 KSRRB M200- 15.2. do- B. Rubble stone masonry in cement mortar. (KPWD 18-19,Sl.No.18.27)	Cum	50	386.1	19,305	
4.00	KSRRB M200-32. Removal of Telephone /Electric poles including excavation and dismantling of foundation concrete and lines under the supervision of concerned department, disposal with all lifts and stacking the serviceable and unserviceable material separately complete as per specifications. MORTH Specification No. 202 (KPWD 18-19,Sl.No.18.57)	Nos	5.00	238.70	1,194	
5.00	KSRRB M200-14.1. Dismantling of existing structures like culverts, bridges, retaining walls and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts complete as per specifications and as directed by engineer in charge. KSRRB M200-14.2. do- Dismantling brick/Tile work B. In cement mortar. (KPWD 18-19,Sl.No.18.23)	Cum	5.00	386.10	1,931	
6.00	KSRRB M200-15.1. Dismantling of existing structures like culverts, bridges, retaining walls and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts complete as per specifications. iKSRRB M200-17.1. do- v) Steel work in all types of Sections upto a Height of 5 m above plinth level excluding Cutting of Rivet. - A. Including dismembering." (KPWD 18-19,Pg.No.140,Sl.No.18.33)	MT	13.00	2082.30	27,070	
7.00	Dismantling doors, windows and clerestory windows (steel or wood) shutter including chowkhats, architrave, holdfasts etc. complete and stacking as directed by Engineer in charge with all leads and lifts. Of area 3 sq. metres and below (CPWD 2018 15.12.1)	Nos.	4.00	274.50	1,098	
8.00	Dismantling cement concrete flooring or plain cement concrete work including removing and conveying the debris to distance 10km (within average thickness of 15 cms). including cost of materials, labour, HOM complete as per specifications. (KPWD 18-19,Sl.No.37.51)	Sqm	50.00	94.60	4,730	

Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks
9.00	Dismantling roofing including ridges, hips, valleys and gutters etc., and stacking the material as directed by engineer in charge with all leads and lifts. 15.28.1 G.S. Sheet. (CPWD 2018 15.18.1)	Sqm	280.00	121.90	34,132	
10.00	Taking out existing CC interlocking paver blocks from footpath/ central verge, including removal of rubbish etc., disposal of unserviceable material to the dumping ground, for which payment shall be made separately and stacking of serviceable material within 50 metre lead as per direction of Engineer-in-Charge.(RA attached)	Sqm	1792.00	74.98	1,34,364	
11.00	Earth work excavation for foundation of structures upto 3 mtrs. by mechanical means as per drawing and technical specification, including setting out, providing shoring, strutting and bracing, removal of stumps and other deleterious matter, dressing of sides and bottom, filling back the excavated earth to the extent required and utilising I transporting the remaining earth upto 1.00km lead. including cost of labour, materials and HOM etc., complete. do-In all types of soils (KPWD 18-19,SI No.2.23.1,Pg.No.8)	Cum	1473.94	57.20	84,309	
12.00	Earth work excavation for foundation of structures upto 3 mtrs. by mechanical means as per drawing and technical specification, including setting out, providing shoring, strutting and bracing, removal of stumps and other deleterious matter, dressing of sides and bottom, filling back the excavated earth to the extent required and utilising I transporting the remaining earth upto 1.00km lead. including cost of labour, materials and HOM etc., complete. do- Soft rock/ordinary rock (without blasting) (KPWD 18-19,SI No.2.23.2,Pg.No.8)	Cum	178.08	73.70	13,124	
13.00	Earthwork in excavation for foundation of structures by Mechanical means as per drawing and technical specification including setting out construction of shoring, strutting, barricading, danger light, bracing, removal of slumps and other deteriorous matter, dressing of sides and levelling the bottom of trench to the extent required, utilising the available excavated earth locally for the work etc. complete. (Depth upto 3m). Hard Rock -Any rock Excavation by using mechanical plants/machinery (KUWSDB 18-19,SI.No.vii.1c,Pg.No.7)	Cum	93.75	744.70	69,814	
14.00	KSRRB 2.3 : Filling available excavated earth (excluding rock) in sides of foundations upto plinth in layers not exceeding 20 cms. in depth, compacting each deposited layer by ramming after watering with lead upto 50 m. and lift upto 1.5 m. including cost of all labour complete as per specifications. specification. No. KBS 2.9 (KPWD 18-19,SI.No.2.10,Pg.No.7)	Cum	629.80	221.10	1,39,249	
15.00	Providing Muram/Gravel Bedding for the pipeline trenches/ at Plith below grade slab , including watering and consolidation by punners etc., complete with all lead and lift as directed including barricading, danger lighting etc., as directed by the Engineer-in-Charge etc., complete, for all type of soils excluding black cotton soil and rock reaches. KUWSDB 18-19, Pg No.9,SI No.6.2	Cum	53.61	284.90	15,272	
16.00	KSRRB 2.8 : Providing and Filling in foundation with granite / trap broken metal 100mm. and down size, with approved sand including hand packing, ramming, watering, including cost of all materials and labour with all lead and lift. complete as per specifications. specification. No. KBS (KPWD 18-19,SI.No.2.15,Pg.No.7)	Cum	143.80	2795.10	4,01,944	
17.00	KSRRB M300-14. Excavation for roadwork in all types of soil with hydraulic excavator of 0.9 bucket capacity including cutting and loading in tippers, trimming bottom and side slopes, in accordance with requirements of lines and grades and cross sections, and transporting disposal location up to a lead of 5.00Km and complete as per specifications. MORTH specification No.301(Including transporting charges, loading and unloading for lead 5km) (Page No 143,SI No : 19.14)	Cum	1195.60	45.10	53,922	
18.00	KSRRB M300-55. Construction of sub-grade transporting to site, spreading, grading to required slope and compacted to meet requirement of Table No. 300-2 complete as per specifications, including cost of earth, watering charges & compaction by vibratory roller to 97% of modified proctors density) MORTH Specification No. 305 (KPWD 18-19,SI.No.19.62,Pg.No.147)	Cum	610.00	620.62	3,78,578	

Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks
19.00	KSRRB M400-6.2. Construction of granular sub base by providing close graded crushed stone aggregate of granite/trap/basalt material,spreading in uniform layers with motor on prepared surface,mixing by mix in place methode by rotavator at OMC, and compacting with vibratory power roller to achieve the desired density,complete as per specification. B.By Mix in Place Methode . Close graded granular sub base material as per 400-1 For Grading II material (Page No 155,SI No : 20.5.2)	Cum	183.00	2382.60	4,36,016	
20.00	KSRRB M600-1.Construction of dry lean cement concrete mix M15 with 1:5:10 OPC cement @160Kgs,with 25mm and down size graded granite/trap/basalt metal coarse aggregate @ 0.86cum and fine aggregate @ 0.58cum Sub-base over prepared sub grade with (coarse and fine aggregate confirming to IS:383) aggregate cement ration not to excee 15:1. Aggregate gradation after blending to be as per Table 600-1, cement content to be determined during trail length construction, concrete strength not to be less than 10Mpa at 7 days,mixed in a batching plant,transported to site,laid with a paver with electronic sensor,compacting with 8-10 tonnes double drum vibratory roller,finishing and curing complete as per specifications.Morth specification No.601 (SI No : 22.1.1 of KPWD 18-19)	Cum	122.00	4452.80	5,43,242	
21.00	KSSRRB M600-2.Construction of unreinforced,dowel jointed, plain cement concrete pavement over a prepared sub base with 25mm and down size graded granite metal coarse aggregate with superplastisizer at 3 lts confirming to IS9103-1999 reaffirmed 2008(Coarse and fine aggregate conforming to IS:383) mixed in a batching and mixing plant as per approved mix design,transported to site,laid with a fixed form or slip form paver spread,compacted and finished in a continuos operation including provision of contraction, expansio, construction and longitudinal joints,including groove cutting chrges, joints filler,separation memberane, sealent primer, joints sealant, debonding strip, dowel bars at 4.5m intervals, tie rod, admixtures as approved, curing compound,finishing to lines and grades as per drawing complete as per sprcifications MORTH specification No.602.do with M40 (420Kg per cum Cement,C.A,0.67 cum F.A.044Cum (Page No 176,SI No : 22.2.2)	Cum	280.60	6341.50	17,79,425	
22.00	Providin and fixing pre cast solid concrete Kerb stones made out of CC 1:2:4 with top and bottom width 114 and 165mm respectively,400mm high and 450mm in length finished with CM 1:3 Plastering and finishing cutting, including cost of all materials,labour,hire charges of machinery,loading,unloading,lead and lift,transportation etc.,complete (Page No 25,SI No : 5.3)	Rmt	1300.00	463.10	6,02,030	
23.00	KSRRB 800-1. Painting two coats after filling the surface with synthetic enamel paint in approved shades on new plastered concrete surfaces, with materials, labour complete as per MORTH specifications section 8. (SI No : 24.1 of KPWD 18-19)	Sqm	474.50	88.00	41,756	
24.00	KSRRB M800-29.3. Cable Duct Across the road KSRRB M800-29.1. Providing and laying of a reinforced cement concrete pipe duct, 300 mm dia, across the road (new construction), extending from drain to drain in cuts and toe of slope to toe of slope in fills, constructing head walls at both ends, providing a minimum fill of granular material over top and sides of RCC pipe as per IRC:98-1997, bedded on a 0.3 m thick layer of granular material free of rock pieces, outer to outer distance of pipe at least half dia of pipe subject to minimum450 mm in case of double and triple row ducts, joints to be made leak proof, invert level of duct to be above higher than ground level to prevent entry of water and dirt, all as per IRC: 98 - 1997 and approved drawings complete as per specifications. Case-III :Triple row for three utility services. (PWD SR 2018-19,SI.No.24.36)	Rmt	45.00	5524.20	2,48,589	
25.00	KSRRB M400-6.1. Construction of granular sub-base by providing close graded crushed stone aggregates of granite / trap / basalt material, mixing in a mechaical mix plant at OMC, carriage of mixed material to work site, spreading in uniform layers with motor grader on prepared surface and compacting with Plate compactor to achieve the desired density, complete as per specifications. A. Plant Mix Method. - Close graded granular sub-base material as per 400-1 For Grading- II Material (RA Attached)	Cum	337.71	2640.00	8,91,554	

Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks
26.00	KSRB 4-1.6 ; Providing and laying in position plain cement concrete of Mix 1:2:4 with OPC @ 240kgs, with 20mm and down size graded granite metal coarse aggregates @ 0.878 cum and fine aggregates @ 0.53cum, machine mixed, concrete laid in layers not exceeding 15 ems. thick, well compacted, in foundation, plinth and cills, including cost of all materials, labour, HOM curing complete as per specifications. Specification No. KBS 4.1, 4.2 (KPWD 18-19,SI No.4.6.2,Pg.No.13)	Cum	159.93	6490.00	10,37,913	
27.00	KSRB-3.2: Providing and injecting chemical emulsion for Pre-constructional Anti-Termite Treatment , creating continuous chemical barrier under and around the column pits, walls, trenches, basement excavation, top surface of the plinth filling, junction of wall and floor, along the external perimeter of building, expansion joints, over the top surface of consolidated earth on which apron is to be laid, surrounding of pipes and conduits, with chloropyrriphos emulsifiable concentrates of 20% concentration at 3.19 Litre/sqm., including cost of chemical, diluting in water to one percent concentration, labour, HOM complete as per specifications. (Plinth area of the building at ground floor only shall be measured) Specification No. KBS: 3.2.6 I 3.2.7 (KPWD 18-19,S.I. No.3.2)	Sqm	234.69	115.50	27,106	
28.00	KSRB 4.2.1 Providing and laying in position reinforced cement concrete of Design Mix M25 with OPC@ 340kgs, with 20mm and down size graded granite metal coarse aggregates @0.70 cum and fine aggregates @ 0.47cum, with super plasticisers @ 3 liters confirming to IS 9103-1999 reaffirmed-2008 at machine mixed, concrete laid in layers not exceeding 15 ems thick, vibrated for all works in foundation for footings , pedestals, retaining walls, return walls, walls (any thickness) including attached pilasters, columns pillars, posts, struts, buttresses, bed blocks, anchor blocks & plinths etc., including cost of all materials, labour, HOM curing, complete but excluding cost of reinforcement as per specifications. Specification No. KBS 4.1, 4.6 (KPWD 18-19,SI No.4.10,Pg.No.14)	Cum	181.92	6817.80	12,40,286	
29.00	KSRB 4.2.7 Providing and laying in position reinforced cement concrete of design Mix M25 with OPC @ 340kgs, with 20mm and down size graded granite metal coarse aggregates @0.70cum and fine aggregates @ 0.47cum, with super plasticisers @31ts confirming to IS9103-1999 Reaffirmed-2008, machine mixed, concrete laid in layers not exceeding 15 ems thick, vibrated for all works in ground floor level for roof slabs, staircase, lintels and beams retaining walls, return walls, walls (any thickness) including attached pilasters, columns, lintles, pillars, posts, struts, buttresses, string or lacing courses, parapets, coping, bed blocks, anchor blocks, plain window cills, fillets etc., including cost of all materials, labour, HOM curing, complete but excluding cost of reinforcement as per specifications. Specification No. KBS 4.1, 4.6 (KPWD 18-19,SI.No.4.12,Pg No.14) Ground Floor	Cum	61.08	7074.10	4,32,109	
30.00	KSRB 4.2.7 Providing and laying in position reinforced cement concrete of design Mix M25 with OPC @ 340kgs, with 20mm and down size graded granite metal coarse aggregates @0.70cum and fine aggregates @ 0.47cum, with super plasticisers @31ts confirming to IS9103-1999 Reaffirmed-2008, machine mixed, concrete laid in layers not exceeding 15 ems thick, vibrated for all works in ground floor level for roof slabs, staircase, lintels and beams retaining walls, return walls, walls (any thickness) including attached pilasters, columns, lintles, pillars, posts, struts, buttresses, string or lacing courses, parapets, coping, bed blocks, anchor blocks, plain window cills, fillets etc., including cost of all materials, labour, HOM curing, complete but excluding cost of reinforcement as per specifications. Specification No. KBS 4.1, 4.6 (KPWD 18-19,SI.No.4.12,Pg No.14) First Floor Beam,Column,Slab	Cum	43.60	7140.10	3,11,309	

Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks
31.00	KSRB 4.2.7 Providing and laying in position reinforced cement concrete of design Mix M25 with OPC @ 340kgs, with 20mm and down size graded granite metal coarse aggregates @0.70cum and fine aggregates @ 0.47cum, with super plasticisers @31ts confirming to IS9103-1999 Reaffirmed-2008, machine mixed, concrete laid in layers not exceeding 15 cms thick, vibrated for all works in ground floor level for roof slabs, staircase, lintels and beams retaining walls, return walls, walls (any thickness) including attached pilasters, columns, lintels, pillars, posts, struts, buttresses, string or lacing courses, parapets, coping, bed blocks, anchor blocks, plain window cills, fillets etc., including cost of all materials, labour, HOM curing, complete but excluding cost of reinforcement as per specifications. Specification No. KBS 4.1, 4.6 (KPWD 18-19,Sl.No.4.12,Pg No.14) Second Floor Beam and Column	Cum	91.46	7206.10	6,59,060	
32.00	KSRB 4.2.7 Providing and laying in position reinforced cement concrete of design Mix M25 with OPC @ 340kgs, with 20mm and down size graded granite metal coarse aggregates @0.70cum and fine aggregates @ 0.47cum, with super plasticisers @31ts confirming to IS9103-1999 Reaffirmed-2008, machine mixed, concrete laid in layers not exceeding 15 cms thick, vibrated for all works in ground floor level for roof slabs, staircase, lintels and beams retaining walls, return walls, walls (any thickness) including attached pilasters, columns, lintels, pillars, posts, struts, buttresses, string or lacing courses, parapets, coping, bed blocks, anchor blocks, plain window cills, fillets etc., including cost of all materials, labour, HOM curing, complete but excluding cost of reinforcement as per specifications. Specification No. KBS 4.1, 4.6 (KPWD 18-19,Sl.No.4.12,Pg No.14) Terrace Floor	Cum	61.16	7272.10	4,44,793	
33.00	Providing and laying M25 grade RCC jacketing work around the existing column including chipping of existing column, applying epoxy as a bonding agent between old concrete and new concrete and required shuttering work, curing, including cost of all material and labour etc. Complete. (Note: Reinforcement steel will be paid separately) (RA Attached)	Cum	15.11	15658.05	2,36,655	
34.00	KSRB 4-6.1 : Providing and removing centering, shuttering, strutting, propping etc., and removal of form work for foundations, footings , bases of columns for mass concrete including cost of all materials, labour complete as per specifications. Specification No. KBS 4.6.2 (KPWD 18-19,Sl.No.4.28,Pg No.16)	Sqm	1235.96	289.30	3,57,563	
35.00	KSRB 4-6.7 : Providing and removing centering, shuttering, strutting, propping etc., and removal of form work for sides and soffits of beams, beam haunchings, cantilever girders, bressumers and lintels not exceeding 1m in depth including cost of all materials, labour complete as per specifications. Specification No. KBS 4.6.2 (KPWD 18-19,Sl.No.4.34,Pg No.17) Plinth Beam, First, Second & Third Floor Beam	Sqm	1017.24	321.20	3,26,737	
36.00	KSRB 4-6.5 : Providing and removing centering, shuttering, strutting, propping etc., and removal of form work for columns, pillars, post and struts, square / rectangular / polygon in plan including cost of all materials, labour complete as per specifications. Specification No. KBS 4.6.2 (KPWD 18-19,Sl.No.4.32,Pg.No.16) Foundation to Plinth and Plinth to First Floor, First Floor to Second Floor & Second Floor to Roof	Sqm	669.92	501.60	3,36,034	
37.00	KSRB 4-6.2 : Providing and removing centering, shuttering, strutting, propping etc., and removal of formwork for suspended floors, landings, balconies and likes, thickness upto 200 mm including cost of all materials, labour complete as per specifications. Specifications No. KBS 4.6.2. do - 0 to 5 mts (KPWD 18-19,Sl.No.4.29.2,Pg.No.16) First Floor Slab, Second Floor Slab & Third Floor	Sqm	412.54	448.80	1,85,146	

Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks
38.00	KSRB 4-6.11 :Providing and removing centering, shuttering, strutting, propping etc., and removal of form work for Stairs (excluding landing) except spiral staircase including cost of all materials, labour complete as per specification. Specification No. KBS 4.6.2 (KPWD 18-19,Sl.No.4.38,Pg.No.17) Second Floor	Sqm	22.87	617.10	14,115	
39.00	KSRB 4-6.10 :Providing and removing centering, shuttering, strutting, propping etc, and removal of form work for chajja, corbels etc., including edges including cost of all materials, labour complete as per specifications. Specification No. KBS 4.6.2 (KPWD 18-19,Sl.No.4.37,Pg.No.17) Second Floor	Sqm	60.06	361.90	21,736	
40.00	KSRB 4-6.4 : Providing and removing centering, shuttering, strutting, propping etc., and removal of form work for vertical surface such as walls at any thickness, including attached pilasters, buttresses, plinth cills and string courses cost of all materials, labour complete as per specifications. Specification No. KBS 4.6.2	Sqm	272.88	397.10	1,08,361	
41.00	KSRB 4.9.2 : Providing T.M.T steel reinforcement for R.C.C work including straightening, cutting, bending, hooking, placing in position, lapping and l or welding wherever required, tying with binding wire and anchoring to the adjoining members wherever necessary complete as per design (laps, hooks and wastage shall not be measured and paid) cost of materials, labour, HOM complete as per specifications. Specification No. KBS 4.6.3 TMT bars Fe 500 (KPWD 18-19,Sl.No.4.46.2,Pg No.18) Ground Floor	MT	26.07	77860.20	20,29,845	
42.00	KSRB 4.9.2 : Providing T.M.T steel reinforcement for R.C.C work including straightening, cutting, bending, hooking, placing in position, lapping and l or welding wherever required, tying with binding wire and anchoring to the adjoining members wherever necessary complete as per design (laps, hooks and wastage shall not be measured and paid) cost of materials, labour, HOM complete as per specifications. Specification No. KBS 4.6.3 TMT bars Fe 500 (KPWD 18-19,Sl.No.4.46.2,Pg No.18) First Floor	MT	5.21	78681.90	4,10,281	
43.00	KSRB 4.9.2 : Providing T.M.T steel reinforcement for R.C.C work including straightening, cutting, bending, hooking, placing in position, lapping and l or welding wherever required, tying with binding wire and anchoring to the adjoining members wherever necessary complete as per design (laps, hooks and wastage shall not be measured and paid) cost of materials, labour, HOM complete as per specifications. Specification No. KBS 4.6.3 TMT bars Fe 500 (KPWD 18-19,Sl.No.4.46.2,Pg No.18) Second Floor	MT	9.32	79503.60	7,41,197	
44.00	KSRB 4.9.2 : Providing T.M.T steel reinforcement for R.C.C work including straightening, cutting, bending, hooking, placing in position, lapping and l or welding wherever required, tying with binding wire and anchoring to the adjoining members wherever necessary complete as per design (laps, hooks and wastage shall not be measured and paid) cost of materials, labour, HOM complete as per specifications. Specification No. KBS 4.6.3 TMT bars Fe 500 (KPWD 18-19,Sl.No.4.46.2,Pg No.18) Third Floor	MT	6.40	80325.30	5,14,367	
45.00	Providing fusion bonded epoxy coating not less than 175 microns thickness and upto 300 microns to reinforcement of all diameters as per IS: 13620-1993 including testing of coating at plant The rate is inclusive of cost on account of careful handling, PVC coated binding wire instead of GI Binding wire, touch up material supplied by coating agency, repair work, loading, unloading and straightening of bent rods etc., complete as per specification and as directed by the Engineer in charge. do For 10mm to 16mm dia bars (KPWD 18-19,Sl.No.7.21.1,Pg.No.40)	MT	47.01	11588.50	5,44,789	

Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks
46.00	Structural steel work riveted, bolted or welded in built up sections, trusses and framed work, including cutting, hoisting, fixing in position and applying, priming coat of approved steel primer all complete. (CPWD 2018, Sl.No.10.2, Pg.No.183)	MT	2.24	101750.00	2,27,920	
47.00	Refixing the existing Structural steel (Roof Truss) work riveted, bolted or welded in built up sections, trusses and framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer all complete	Kg	7280.00	20.40	1,48,512	
48.00	Fixing corrugated G.S. sheet roofing including vertical / curved surface fixed with polymer coated J or L hooks, bolts and nuts 8 mm diameter with bitumen and G.I. limpet washers or with G.I. limpet washers filled with white lead, including a coat of approved steel primer and two coats of approved paint on overlapping of sheets complete (up to any pitch in horizontal/ vertical or curved surfaces), excluding the cost of purlins, rafters and trusses and including cutting to size and shape wherever required.	Sqm	270.00	188.00	50,760	
49.00	Providing corrugated G.S. sheet roofing including vertical / curved surface fixed with polymer coated J or L hooks, bolts and nuts 8 mm diameter with bitumen and G.I. limpet washers or with G.I. limpet washers filled with white lead, including a coat of approved steel primer and two coats of approved paint on overlapping of sheets complete (up to any pitch in horizontal/ vertical or curved surfaces), excluding the cost of purlins, rafters and trusses and including cutting to size and shape wherever required. 1.00 mm thick with zinc coating not less than 275 gm/m²	Sqm	88.00	1234.25	1,08,614	
50.00	KSRB 14.6: Providing and laying heavy duty cobble stones interlock pavers, using cement and coarse sand for manufacture of blocks of approved size, shape and colour with a minimum compressive strength of 281 kg per sqm over 50mm thick sand bed (average thickness) and compacting with plate vibrator having 3 tons compaction force thereby forcing part of sand underneath to come up in between JOints, final compaction of paver surface JOints into its final level, including cost of materials, labour and HOM complete as per specifications. Specification No. KBS KSRB 14.6-1 : do- heavy duty cobble stones 60mm thick (KPWD 18-19, Sl.No.14.6, Pg.No.103)	Sqm	1078.40	1161.60	12,52,669	
51.00	Providing and laying eco-loc permeable pavers, 80mm or equivalent block making machine with strong vibratory compaction, of approved size, design & shape, laid in required colour and pattern over and including 50mm thick compacted bed of coarse sand, filling the joints with line sand etc. all complete as per the direction of Engineer-in-charge.	Sqm	1173.00	2073.00	24,31,629	
52.00	Providing and fixing 15cm wide, 45cm overall semi circular plain GS Sheet gutter with iron brackets 40 x 3mm size, bolts, nuts and washers etc, including making necessary connections with rain water pipes complete, 0.8mm thick with zinc coating not less than 275gm/m² (CPWD 2018, Sl.No.12.7.1, Pg.No.211)	Rm	40.00	765.00	30,600	
53.00	Providing and fixing unplasticised PVC pipes with working pressure 10 kg/sq.cm with pipe fittings, clips, making good the floor, including cost of all materials, labour charges, HOM and testing complete as per specifications. do- with 160mm outer dia KPWD 18-19, Sl.No.11.56.4, Pg.No.77	Rm	137.50	1377.20	1,89,365	
54.00	Providing and constructing laterite size stone masonry including cost and conveyance of all materials curing etc complete as per specification. I.S. 3620/1979 having compressive strength not less than 3.5 N/mm² for saturated dry samples. For basement in CM 1:6 (Cement 45 kgs/M³) (KPWD 2018-19, 42.5.1) Plinth Masonry	Cum	119.83	3,499.10	4,19,297	
55.00	Providing and constructing laterite size stone masonry including cost and conveyance of all materials curing etc complete as per specification. I.S. 3620/1979 having compressive strength not less than 3.5 N/mm² for saturated dry samples. For basement in CM 1:6 (Cement 45 kgs/M³) (KPWD 2018-19, 42.5.1) For super structure in CM 1:6 (Cement 45 kgs/M³)- Ground Floor (KPWD 2018-19, 42.5.3)	Cum	125.25	3,730.10	4,67,195	

Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks
56.00	Providing and constructing laterite size stone masonry including cost and conveyance of all materials curing etc complete as per specification. I.S. 3620/1979 having compressive strength not less then 3.5 N/mm2 for saturated dry samples. For basement in CM 1:6 (Cement 45 kgs/M3) (KPWD 2018-19,42.5.1) For super structure in CM 1:6 (Cement 45 kgs/M3)- First Floor (KPWD 2018-19,42.5.3)	Cum	4.14	4,073.30	16,863	
57.00	Providing and constructing laterite size stone masonry including cost and conveyance of all materials curing etc complete as per specification. I.S. 3620/1979 having compressive strength not less then 3.5 N/mm2 for saturated dry samples. For basement in CM 1:6 (Cement 45 kgs/M3) (KPWD 2018-19,42.5.1) For super structure in CM 1:6 (Cement 45 kgs/M3)- Second Floor (KPWD 2018-19,42.5.3)	Cum	71.15	4,416.50	3,14,246	
58.00	Providing and constructing non load bearing wall with Light Weight Concrete (Autoclaved aerated concrete) Blocks confirming to IS:2185 (part-3) 1984 and IS 6441-1972 of compressive strength of 3.0N/sq mm with a thin layer of polymer based jointing solvent for super structure with necessary scaffolding, curing including cost of all materials, labour, lead& lift etc, complete as per specifications. with 600x200x150mm size Blocks Ground Floor (KPWD 18-19,Sl.No.6.32.2,Pg.No.31)	Sqm	8.94	1,504.00	13,446	
59.00	Providing and constructing non load bearing wall with Light Weight Concrete (Autoclaved aerated concrete) Blocks confirming to IS:2185 (part-3) 1984 and IS 6441-1972 of compressive strength of 3.0N/sq mm with a thin layer of polymer based jointing solvent for super structure with necessary scaffolding, curing including cost of all materials, labour, lead& lift etc, complete as per specifications. with 600x200x150mm size Blocks First Floor (KPWD 18-19,Sl.No.6.32.2,Pg.No.31)	Sqm	19.28	1 661.00	32,024	
60.00	Providing and constructing non load bearing wall with Light Weight Concrete (Autoclaved aerated concrete) Blocks confirming to IS:2185 (part-3) 1984 and IS 6441-1972 of compressive strength of 3.0N/sq mm with a thin layer of polymer based jointing solvent for super structure with necessary scaffolding, curing including cost of all materials, labour, lead& lift etc, complete as per specifications. with 600x200x150mm size Blocks Second Floor (KPWD 18-19,Sl.No.6.32.2,Pg.No.31)	Sqm	14.56	1 667.60	24,280	
61.00	Providing and constructing non load bearing wall with Light Weight Concrete (Autoclaved aerated concrete) Blocks confirming to IS:2185 (part-3) 1984 and IS 6441-1972 of compressive strength of 3.0N/sq mm with a thin layer of polymer based jointing solvent for super structure with necessary scaffolding, curing including cost of all materials, labour, lead& lift etc, complete as per specifications. with 600x200x150mm size Blocks Third Floor (KPWD 18-19,Sl.No.6.32.2,Pg.No.31)	Sqm	3.62	1 674.20	6,061	
62.00	Providing and constructing non load bearing wall with Light Weight Concrete (Autoclaved aerated concrete) Blocks confirming to IS:2185 (part-3) 1984 and IS 6441-1972 of compressive strength of 3.0N/sq mm with a thin layer of polymer based jointing solvent for super structure with necessary scaffolding, curing including cost of all materials, labour, lead& lift etc, complete as per specifications. with 600x200x230mm size Blocks Ground Floor (KPWD 18-19,Sl.No.6.32.4,Pg.No.31)	Sqm	13.07	2 066.00	27,003	
63.00	Providing and constructing non load bearing wall with Light Weight Concrete (Autoclaved aerated concrete) Blocks confirming to IS:2185 (part-3) 1984 and IS 6441-1972 of compressive strength of 3.0N/sq mm with a thin layer of polymer based jointing solvent for super structure with necessary scaffolding, curing including cost of all materials, labour, lead& lift etc, complete as per specifications. with 600x200x230mm size Blocks First Floor (KPWD 18-19,Sl.No.6.32.4,Pg.No.31)	Sqm	21.72	2 279.20	49,504	

Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks
64.00	Providing and constructing non load bearing wall with Light Weight Concrete (Autoclaved aerated concrete) Blocks conforming to IS:2185 (part-3) 1984 and IS 6441-1972 of compressive strength of 3.0N/sq mm with a thin layer of polymer based jointing solvent for super structure with necessary scaffolding, curing including cost of all materials, labour, lead & lift etc, complete as per specifications. with 600x200x230mm size Blocks Second Floor (KPWD 18-19, Sl.No.6.32.4, Pg.No.31)	Sqm	59.67	2 285.80	1,36,394	
65.00	Providing and constructing non load bearing wall with Light Weight Concrete (Autoclaved aerated concrete) Blocks conforming to IS:2185 (part-3) 1984 and IS 6441-1972 of compressive strength of 3.0N/sq mm with a thin layer of polymer based jointing solvent for super structure with necessary scaffolding, curing including cost of all materials, labour, lead & lift etc, complete as per specifications. with 600x200x230mm size Blocks Third Floor (KPWD 18-19, Sl.No.6.32.4, Pg.No.31)	Sqm	32.58	2 292.40	74,686	
66.00	KSRB15-3 : Providing 15mm thick cement plaster in single coat with cement mortar to brick masonry including rounding off corners wherever required smooth rendering, Providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications. do- cement mortar 1:4 (KPWD 18-19, Sl.No.15.13, Pg.No.115)i) Ground Floor	Sqm	157.29	244.20	38,409	
67.00	KSRB15-3 : Providing 15mm thick cement plaster in single coat with cement mortar to brick masonry including rounding off corners wherever required smooth rendering, Providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications. do- cement mortar 1:4 (KPWD 18-19, Sl.No.15.13, Pg.No.115) ii) First Floor	Sqm	113.40	250.80	28,441	
68.00	KSRB15-3 : Providing 15mm thick cement plaster in single coat with cement mortar to brick masonry including rounding off corners wherever required smooth rendering, Providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications. do- cement mortar 1:4 (KPWD 18-19, Sl.No.15.13, Pg.No.115) iii) Second Floor	Sqm	345.28	257.40	88,875	
69.00	KSRB15-3 : Providing 15mm thick cement plaster in single coat with cement mortar to brick masonry including rounding off corners wherever required smooth rendering, Providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications. do- cement mortar 1:4 (KPWD 18-19, Sl.No.15.13, Pg.No.115) iv) Third Floor	Sqm	88.56	264.00	23,380	
70.00	KSRB15-5 : Providing rough cement plastering 15mm thick in single coat with cement mortar to brick masonry for base of dadoing works with sand of approved quality, providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications. do - cement mortar 1:6 (KPWD 18-19, Sl.No.15.31, Pg.No.117) i) Ground Floor	Sqm	113.39	213.40	24,197	
71.00	KSRB15-5 : Providing rough cement plastering 15mm thick in single coat with cement mortar to brick masonry for base of dadoing works with sand of approved quality, providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications. do - cement mortar 1:6 (KPWD 18-19, Sl.No.15.31, Pg.No.117) ii) First Floor	Sqm	113.39	220.00	24,946	
72.00	KSRB15-5 : Providing rough cement plastering 15mm thick in single coat with cement mortar to brick masonry for base of dadoing works with sand of approved quality, providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications. do - cement mortar 1:6 (KPWD 18-19, Sl.No.15.31, Pg.No.117) ii) Second Floor	Sqm	205.74	226.60	46,621	

Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks
73.00	Providing applying two coats of wall putty to inside plastered walls and ceiling using white cement putty. Scrapping and levelling the surface using steel blade and preparing the surface even and smooth by using different grade sand papers, including cost of all materials, cost of labour and scaffolding etc., complete as per the specification. (KPWD 18-19,Sl.No.15.106,Pg.No.128) i) Ground Floor	Sqm	117.43	85.80	10,075	
74.00	Providing applying two coats of wall putty to inside plastered walls and ceiling using white cement putty. Scrapping and levelling the surface using steel blade and preparing the surface even and smooth by using different grade sand papers, including cost of all materials, cost of labour and scaffolding etc., complete as per the specification. (KPWD 18-19,Sl.No.15.106,Pg.No.128) ii) First Floor	Sqm	113.40	92.40	10,478	
75.00	Providing applying two coats of wall putty to inside plastered walls and ceiling using white cement putty. Scrapping and levelling the surface using steel blade and preparing the surface even and smooth by using different grade sand papers, including cost of all materials, cost of labour and scaffolding etc., complete as per the specification. (KPWD 18-19,Sl.No.15.106,Pg.No.128) iii) Second Floor	Sqm	345.28	99.00	34,183	
76.00	Providing applying two coats of wall putty to inside plastered walls and ceiling using white cement putty. Scrapping and levelling the surface using steel blade and preparing the surface even and smooth by using different grade sand papers, including cost of all materials, cost of labour and scaffolding etc., complete as per the specification. (KPWD 18-19,Sl.No.15.106,Pg.No.128) iv) Third Floor	Sqm	88.56	105.60	9,352	
77.00	KSRB15-3 : Providing 12mm thick cement plaster in single coat with cement mortar, to ceiling including rounding off corners wherever required smooth rendering, including providing and removing scaffolding, cost of materials, labour, curing etc., complete as per specification. do- cement mortar 1:4 (KPWD 18-19,Sl.No.15.22,Pg.No.116) Ground Floor	Sqm	101.00	248.60	25,109	
78.00	KSRB15-3 : Providing 12mm thick cement plaster in single coat with cement mortar, to ceiling including rounding off corners wherever required smooth rendering, including providing and removing scaffolding, cost of materials, labour, curing etc., complete as per specification. do- cement mortar 1:4 (KPWD 18-19,Sl.No.15.22,Pg.No.116) First Floor	Sqm	98.00	255.20	25,010	
79.00	KSRB15-3 : Providing 12mm thick cement plaster in single coat with cement mortar, to ceiling including rounding off corners wherever required smooth rendering, including providing and removing scaffolding, cost of materials, labour, curing etc., complete as per specification. do- cement mortar 1:4 (KPWD 18-19,Sl.No.15.22,Pg.No.116) Second Floor Ceiling	Sqm	280.00	261.80	73,304	
80.00	KSRB15-3 : Providing 18mm thick cement plaster in single coat with cement mortar to brick masonry including rounding off corners wherever required smooth rendering, Providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications. do - cement mortar 1:4 (KPWD 18-19,Sl.No.15.16,Pg.No.116)	Sqm	1276.32	288.20	3,67,835	
81.00	Providing and fixing Vitrified glazed tiles of approved make, quality & colour of size 600 x 600 x 10mm thick fixed on bed of 12mm thick cement mortar for flooring, skirting and jointed with neat cement slurry mixed with pigment to match shade of tiles, including providing spacers at required interval and removing stains, including cost of all materials, mortar, labour, etc, Complete as per specification. (KPWD 18-19,Sl.No.14.45,Pg.No.109) Ground Floor	Sqm	48.40	1,240.80	60,055	

Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks
82.00	Providing and fixing Vitrified glazed tiles of approved make, quality & colour of size 600 x 600 x 10mm thick fixed on bed of 12mm thick cement mortar for flooring, skirting and jointed with neat cement slurry mixed with pigment to match shade of tiles, including providing spacers at required interval and removing stains, including cost of all materials, mortar, labour, etc , Complete as per specification. (KPWD 18-19,Sl.No.14.45,Pg.No.109) First Floor	Sqm	46.48	1,243.00	57,775	
83.00	Providing and fixing Vitrified glazed tiles of approved make, quality & colour of size 600 x 600 x 10mm thick fixed on bed of 12mm thick cement mortar for flooring, skirting and jointed with neat cement slurry mixed with pigment to match shade of tiles, including providing spacers at required interval and removing stains, including cost of all materials, mortar, labour, etc , Complete as per specification. (KPWD 18-19,Sl.No.14.45,Pg.No.109) Second Floor	Sqm	235.35	1,245.20	2,93,058	
84.00	Providing and fixing Vitrified glazed tiles of approved make, quality & colour of size 600 x 600 x 10mm thick fixed on bed of 12mm thick cement mortar for flooring, skirting and jointed with neat cement slurry mixed with pigment to match shade of tiles, including providing spacers at required interval and removing stains, including cost of all materials, mortar, labour, etc , Complete as per specification. (KPWD 18-19,Sl.No.14.45,Pg.No.109) Terrace Floor	Sqm	245.85	1,247.40	3,06,673	
85.00	KSRB 14.14-5: Providing Ceramic tiles of approved make, shade and size for flooring, treads of steps and landings laid on a bed of 12mm thick, cement mortar 1 3 mix, flush pointing with white cement using colour pigment , including cost of materials, labour, curing, complete as per specifications. for Ceramic Tiles of size 30x30cms, 6mm thick (KPWD 18-19,Sl.No.14.36.2,Pg.No.108) Ground Floor	Sqm	12.10	1,332.10	16,118	
86.00	KSRB 14.14-5: Providing Ceramic tiles of approved make, shade and size for flooring, treads of steps and landings laid on a bed of 12mm thick, cement mortar 1 3 mix, flush pointing with white cement using colour pigment , including cost of materials, labour, curing, complete as per specifications. for Ceramic Tiles of size 30x30cms, 6mm thick (KPWD 18-19,Sl.No.14.36.2,Pg.No.108) First Floor	Sqm	10.50	1,334.30	14,010	
87.00	KSRB 14.14-5: Providing Ceramic tiles of approved make, shade and size for flooring, treads of steps and landings laid on a bed of 12mm thick, cement mortar 1 3 mix, flush pointing with white cement using colour pigment , including cost of materials, labour, curing, complete as per specifications. for Ceramic Tiles of size 30x30cms, 6mm thick (KPWD 18-19,Sl.No.14.36.2,Pg.No.108) Second Floor	Sqm	10.50	1,336.50	14,033	
88.00	KSRB 14.3 Providing and laying flooring and steps machine cut granite slabs 40mm thick on cement mortar bed 1:6, 25 mm thick, and pointed with cement mortar 1:3 over existing cement concrete bed, including cost of materials, mortar, labour, curing complete as per specifications. Specification No. KBS 14.26	Sqm	20.18	2,764.30	55,784	
89.00	Providing and fixing colour glazed tiles of size 300mmx600mm for walls with borders of size 300x100mm, set in Cement Mortar 1:3 and pointed with white cement with matching colour pigment with necessary curing, cleaning including providing and removing scaffolding wherever necessary etc., complete. The work includes cost of all materials, mortar, labour charges for all items of work, hire charges for equipment etc., complete as per specification. (KPWD 18-19,Sl.No.14.64,Pg.No.112) Ground Floor	Sqm	113.39	1,334.30	1,51,296	

Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks
90.00	Providing and fixing colour glazed tiles of size 300mmx600mm for walls with borders of size 300x100mm, set in Cement Mortar 1:3 and pointed with white cement with matching colour pigment with necessary curing, cleaning including providing and removing scaffolding wherever necessary etc., complete. The work includes cost of all materials, mortar, labour charges for all items of work, hire charges for equipment etc., complete as per specification. (KPWD 18-19,Sl.No.14.64,Pg.No.112) First Floor	Sqm	113.39	1,336.50	1,51,546	
91.00	Providing and fixing colour glazed tiles of size 300mmx600mm for walls with borders of size 300x100mm, set in Cement Mortar 1:3 and pointed with white cement with matching colour pigment with necessary curing, cleaning including providing and removing scaffolding wherever necessary etc., complete. The work includes cost of all materials, mortar, labour charges for all items of work, hire charges for equipment etc., complete as per specification. (KPWD 18-19,Sl.No.14.64,Pg.No.112) Second Floor	Sqm	113.39	1,338.70	1,51,795	
92.00	Providing and Fixing Laterite Stone Cladding 25mm thk (polished) with an adhesive over existing cement palster surface with two coat of polish,including all lead and lifts,scaffoldingetc. and complete.	Sqm	72.88	2,500.75	1,82,255	
93.00	Providing and fixing of wall cladding using 20 mm thick gang saw water cut granite in CM 1:3 proportion cut to required shape patron with paper joint finished with cement mortar using white cement and colour pigments to match the colour of slab making through jointing with sealant, making holes 25mm x 12mm grooves in JOints including cost of all materials, mortar, labour, curing etc., complete as per specification. do- with grey granite 20mm thick gang saw with minimum width 1200 mm Ground Floor	Sqm	7.98	2,692.80	21,489	
94.00	Providing and fixing of wall cladding using 20 mm thick gang saw water cut granite in CM 1:3 proportion cut to required shape patron with paper joint finished with cement mortar using white cement and colour pigments to match the colour of slab making through jointing with sealant, making holes 25mm x 12mm grooves in JOints including cost of all materials, mortar, labour, curing etc., complete as per specification. do- with grey granite 20mm thick gang saw with minimum width 1200 mm First Floor	Sqm	7.98	2,694.80	21,505	
95.00	Providing and fixing of wall cladding using 20 mm thick gang saw water cut granite in CM 1:3 proportion cut to required shape patron with paper joint finished with cement mortar using white cement and colour pigments to match the colour of slab making through jointing with sealant, making holes 25mm x 12mm grooves in JOints including cost of all materials, mortar, labour, curing etc., complete as per specification. do- with grey granite 20mm thick gang saw with minimum width 1200 mm Second Floor	Sqm	7.98	2,696.80	21,520	
96.00	Providing and fixing of wall cladding using 20 mm thick gang saw water cut granite in CM 1:3 proportion cut to required shape patron with paper joint finished with cement mortar using white cement and colour pigments to match the colour of slab making through jointing with sealant, making holes 25mm x 12mm grooves in JOints including cost of all materials, mortar, labour, curing etc., complete as per specification. do- with grey granite 20mm thick gang saw with minimum width 1200 mm Third Floor	Sqm	7.98	2,698.80	21,536	
97.00	Providing and laying platform using prepolished, water cut I gang saw 40mm thick telephonic Black Granite. laid on existing vertical -supports and fixing in CM 1:3 proportion. Including cutting to required shape, pattern with paper joints, including full rounding for nosing, finished with cement mortar, pointed with colour pigments to match the colour of slab making through jointing with sealant, making holes 25mm x 12mm grooves in JOints including cost of all materials, mortar, labour, curing etc., complete as per specification. (KPWD 18-19,Sl.No.14.52,Pg.No.110) Ground Floor	Sqm	1.43	3,877.50	5,525	

Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks
98.00	Providing and laying platform using prepolished, water cut I gang saw 40mm thick telephonic Black Granite. laid on existing vertical -supports and fixing in CM 1:3 proportion. Including cutting to required shape, pattern with paper joints, including full rounding for nosing, finished with cement mortar, pointed with colour pigments to match the colour of slab making through jointing with sealant, making holes 25mm x 12mm grooves in JOints including cost of all materials, mortar, labour, curing etc., complete as per specification. (KPWD 18-19,Sl.No.14.52,Pg.No.110) First Floor	Sqm	2.48	3,879.50	9,631	
99.00	Providing and laying platform using prepolished, water cut I gang saw 40mm thick telephonic Black Granite. laid on existing vertical -supports and fixing in CM 1:3 proportion. Including cutting to required shape, pattern with paper joints, including full rounding for nosing, finished with cement mortar, pointed with colour pigments to match the colour of slab making through jointing with sealant, making holes 25mm x 12mm grooves in JOints including cost of all materials, mortar, labour, curing etc., complete as per specification. (KPWD 18-19,Sl.No.14.52,Pg.No.110) Second Floor	Sqm	2.48	3,881.50	9,636	
100.00	KSRB 15-15.1 • Providing and applying painting in two coats with plastic emulsion paint of approved brand on wall surface to give an even approved shade after thoroughly brushing the surface, free from mortar drops and other foreign matter including preparing the surface even and sand paper smooth, cost of materials, labour, complete as per specifications.do- with primer (KPWD 18-19,Sl.No.15.51.2,Pg No.119)	Sqm	801.20	99.00	79,319	
101.00	Providing external walls with texture finish using approved brand paint, applied uniformly in three coats over one coat of primer including cost of all materials, machineries, labour, transportation, loading and unloading, all lead and lift and all other incidental charges including scaffolding and removing stains, complete as per specifications. (KPWD 18-19,Sl.No.15.103,Pg No.127)	Sqm	2441.56	374.00	9,13,142	
102.00	Providing and fixing food grade epoxy painting to over head tank,under ground tank and sump tank after cleaning and drying including pumping and bailing out of water, including cost of all materials labour lead and lifts etc., complete (KPWD 18-19,Sl.No.10.6,Pg.No.69)	Sqm	48.66	96.80	4,710	
103.00	KSRB 10-3 :Providing and laying integral cement based waterproofing treatment including preparation of surface as required for treatment of roofs, balconies, terraces etc , consisting of following application. (a) Applying and grouting a slurry coat of neat cement using 2.75 kg/sqm of cement admixed with proprietary water proofing compound conforming to 18:2645 over the RCC slab after cleaning the surface before treatment. (b) Laying cement concrete using broken brick bats 25mm to 100mm size with 50% of cement mortar 1:5 admixed with proprietary water proofing compound conforming 18:2645 over 20mm thick layer of cement mortar 1:5 admixed with proprietary water proofing compound to required slope and treating similarly the adjoining walls upto 300mm height including rounding off junctions of walls and slabs. (c) After two days of proper curing, applying a second coat of cement lurry admixed with proprietary water proofing compound (d) Finishing the surface with 20mm thick joint less cement mortar of mix 1:4 admixed with proprietary water proofing compound and finally finishing the surface with trowel and neat cement slurry and making of 300x300mm square. (e) The whole terrace so finished shall be flooded with water for a minimum period of two weeks for curing and for final test including cost of materials, labour complete as per specifications. (KPWD 18-19,Sl.No.10.2,Pg.No.68)	Sqm	260.40	1112.10	2,89,591	

Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks
104.00	Waterproofing of RCC Terrace I podium slab I toilet I utilities I water retaining structure by preparing the surface by chipping and cleaning and Grouting of Honey comb, voids,cracks I construction joints with cement slurry (1kg cement added in 10 ltr of water) added with 100gm of inorganic accelerator, followed by spraying of liquid biological modified alkaline earth silicates@ 040 ltr per sqm on whole surface to reduce the micro porosity and allowing it to dry, curing the surface for the silicates to penetrate deeper into the concrete and spraying waterproofing impregnate liquid containing silane and silanollinear copolymer@ 0.50 ltr per sqm and finally applying polymer slurry made out of cross linked acrylic I styrene I butadiene & cement in the ratio of 1:0.1, @ 0.50kgsqm on the whole surface, including all labour charges tools and equipments, all complete as per the specification (KPWD 18-19,Sl.No.10.5.1,Pg.No.69)	Sqm	47.55	578.60	27,512	
105.00	Providing and laying integral cement based treatment for water proofing on the vertical surface by fixing specified stone slab 22 mm to 25 mm thick with cement slurry mixed with water proofing compound conforming to IS:2645 in recommended proportions with a gap of 20 mm (minimum) between stone slabs and the receiving surfaces and filling the gaps with neat cement slurry mixed with water proofing compound and finishing the exterior of stone slab with cement mortar 1:3 (1 cement : 3 coarse sand) 20 mm thick with neat cement punning mixed with water proofing compound in recommended proportion complete at all levels and as directed by Engineer-in-charge. Using rough Kota stone (CPWD 2019,22.2)	Sqm	43.07	1738.00	74,856	
106.00	Providing and fixing in position pre-cast R.C.C. manhole cover and frame of required shape and approved quality.HD-20 Circular shape 600 mm internal dia. (CPWD 19,19.19.4.1)	Nos.	1.00	1471.50	1,472	
107.00	Providing M.S. foot rests including fixing in RCC tank with 20x20x10 cm cement concrete blocks 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) as per standard design : With 20 mm diameter round bar (CPWD 19.15.2)	Cun	9.00	383.70	3,453	
108.00	KSRB 9.4-1 : Providing wood frames of doors, windows, clerestory windows, ventilators and other frames, wrought, framed or assembled including making plaster groves (excluding cost of cement concrete and side clamps), but including cost of materials, labour, HOM complete as per specifications. Specification No. KBS 9.33KSRB 9.4-3 : -do - Mathi I Nandi wood frames (KPWD 18-19,Sl.No.9.12,Pg.No.53)	Cum	0.26	1,12,357.30	28,914	
109.00	KSRB 9.5 : Providing and fixing in position fully panelled wood shutters for doors, with styles and rails of 40mm. thick with bottom and lock rails 180mm wide top rail and styles 100mm wide as per drawing and panels of 25mm thick including cost of materials, labour, HOM complete as per specifications. (excluding cost of fixtures) Specification No. KBS 9.34KSRB 9-6.3 :do- MathiiNandi wood styles and rails of 35mm thick (KPWD 18-19,Sl.No.9.19,Pg.No.53) Ground Floor	Sqm	8.82	5,517.60	48,665	
110.00	KSRB 9.5 : Providing and fixing in position fully panelled wood shutters for doors, with styles and rails of 40mm. thick with bottom and lock rails 180mm wide top rail and styles 100mm wide as per drawing and panels of 25mm thick including cost of materials, labour, HOM complete as per specifications. (excluding cost of fixtures) Specification No. KBS 9.34KSRB 9-6.3 :do- MathiiNandi wood styles and rails of 35mm thick (KPWD 18-19,Sl.No.9.19,Pg.No.53) First Floor	Sqm	8.82	5,522.00	48,704	

Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks
111.00	KSRB 9.5 : Providing and fixing in position fully panelled wood shutters for doors, with styles and rails of 40mm. thick with bottom and lock rails 180mm wide top rail and styles 100mm wide as per drawing and panels of 25mm thick including cost of materials, labour, HOM complete as per specifications. (excluding cost of fixtures) Specification No. KBS 9.34KSRB 9-6.3 :do- MathiiNandi wood styles and rails of 35mm thick (KPWD 18-19,Sl.No.9.19,Pg.No.53) Second Floor	Sqm	6.30	5,526.40	34,816	
112.00	KSRB 9.5 : Providing and fixing in position fully panelled wood shutters for doors, with styles and rails of 40mm. thick with bottom and lock rails 180mm wide top rail and styles 100mm wide as per drawing and panels of 25mm thick including cost of materials, labour, HOM complete as per specifications. (excluding cost of fixtures) Specification No. KBS 9.34KSRB 9-6.3 :do- MathiiNandi wood styles and rails of 35mm thick (KPWD 18-19,Sl.No.9.19,Pg.No.53) Terrace Floor	Sqm	5.04	5,530.80	27,875	
113.00	SOLID PANEL PRELAM PVC DOOR SHUTTER Providing & fixing 30mm thick factory made rigid foam Prelam Panelled Door Shutters made from M.S. tube of 19x19mm, 19 gauge for styles and 15x15mm for top & bottom rails, covered with heat moulded Prelaminated PVC C Channel of 5mm thick sheet & 30x50mm wide to form styles & 5mm thick & 75mm wide Prelaminated PVC Sheets for top rail, lock rail & bottom rail on either side & 5mm thick, 20mm wide cross PVC sheet as gap insert for top rail & bottom rail, Panelling of 5mm thick PVC sheet Prelaminated on either side fitted in the M.S.frame,Sealed to the styles & rails with PVC Designer beading on either side & joined together with solvent cement adhesive etc., Complete as per manufacturers specification & direction of Engineer-in-charge fixed to frames with 3 nos of 75mm. Aluminium hinges.do-with both side prelam (KPWD 18-19,Sl.No.9.85,Pg No.60 & 61) Ground Floor	Sqm	3.78	4,120.60	15,576	
114.00	SOLID PANEL PRELAM PVC DOOR SHUTTER Providing & fixing 30mm thick factory made rigid foam Prelam Panelled Door Shutters made from M.S. tube of 19x19mm, 19 gauge for styles and 15x15mm for top & bottom rails, covered with heat moulded Prelaminated PVC C Channel of 5mm thick sheet & 30x50mm wide to form styles & 5mm thick & 75mm wide Prelaminated PVC Sheets for top rail, lock rail & bottom rail on either side & 5mm thick, 20mm wide cross PVC sheet as gap insert for top rail & bottom rail, Panelling of 5mm thick PVC sheet Prelaminated on either side fitted in the M.S.frame,Sealed to the styles & rails with PVC Designer beading on either side & joined together with solvent cement adhesive etc., Complete as per manufacturers specification & direction of Engineer-in-charge fixed to frames with 3 nos of 75mm. Aluminium hinges.do-with both side prelam (KPWD 18-19,Sl.No.9.85,Pg No.60 & 61) First Floor	Sqm	3.78	4,125.00	15,593	
115.00	SOLID PANEL PRELAM PVC DOOR SHUTTER Providing & fixing 30mm thick factory made rigid foam Prelam Panelled Door Shutters made from M.S. tube of 19x19mm, 19 gauge for styles and 15x15mm for top & bottom rails, covered with heat moulded Prelaminated PVC C Channel of 5mm thick sheet & 30x50mm wide to form styles & 5mm thick & 75mm wide Prelaminated PVC Sheets for top rail, lock rail & bottom rail on either side & 5mm thick, 20mm wide cross PVC sheet as gap insert for top rail & bottom rail, Panelling of 5mm thick PVC sheet Prelaminated on either side fitted in the M.S.frame,Sealed to the styles & rails with PVC Designer beading on either side & joined together with solvent cement adhesive etc., Complete as per manufacturers specification & direction of Engineer-in-charge fixed to frames with 3 nos of 75mm. Aluminium hinges.do-with both side prelam (KPWD 18-19,Sl.No.9.85,Pg No.60 & 61) Second Floor	Sqm	7.56	4,129.40	31,218	

Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks
116.00	Providing and fixing pre fabricated non-monolithic R.C.C. Door Frames factory manufactured in separate parts and assembled at bolt nuts system with mechanical table vibrating as per IS 6523-1983 with using M25 concrete as per IS 456 with a cross section of 60 mm x 100 mm reinforced with 1.70 kg of TMT steel reinforced with 3 Nos. of 6 mm dia Main TMT bars and 6 mm Dia TMT stirrups welded at 40 em c/c in triangle shape per meter length of door frames, including cost of steel and fabrication charges having 3/4 No. Stainless Steel hinges plate attachment made of 165 mm x 25 mm x 2.5 mm Stainless Steel Flat welded with required iron rods and flats with drilling for fixing flat CSK Head Machine screws and nut made out of 304 grade stainless steel screws, nut and MS square nut of size 8 x 8 square and length 10 mm and making necessary provision in concrete for fixing aldrops, tower bolts and hold fasts etc., complete including two coats of oil based enamel primer providing without cill for shutter thickness upto 30 mm, 21 days tank immersed curing including cost of labour, materials, HOM etc., complete excluding the cost of door Fixtures as per the direction of Engineer (KPWD 18-19,Sl.No.9.98,Pg.No.63 & 64) Ground Floor	Rmt	9.90	980.10	9,703	
117.00	Providing and fixing pre fabricated non-monolithic R.C.C. Door Frames factory manufactured in separate parts and assembled at bolt nuts system with mechanical table vibrating as per IS 6523-1983 with using M25 concrete as per IS 456 with a cross section of 60 mm x 100 mm reinforced with 1.70 kg of TMT steel reinforced with 3 Nos. of 6 mm dia Main TMT bars and 6 mm Dia TMT stirrups welded at 40 em c/c in triangle shape per meter length of door frames, including cost of steel and fabrication charges having 3/4 No. Stainless Steel hinges plate attachment made of 165 mm x 25 mm x 2.5 mm Stainless Steel Flat welded with required iron rods and flats with drilling for fixing flat CSK Head Machine screws and nut made out of 304 grade stainless steel screws, nut and MS square nut of size 8 x 8 square and length 10 mm and making necessary provision in concrete for fixing aldrops, tower bolts and hold fasts etc., complete including two coats of oil based enamel primer providing without cill for shutter thickness upto 30 mm, 21 days tank immersed curing including cost of labour, materials, HOM etc., complete excluding the cost of door Fixtures as per the direction of Engineer (KPWD 18-19,Sl.No.9.98,Pg.No.63 & 64) First Floor	Rmt	9.90	984.50	9,747	
118.00	Providing and fixing pre fabricated non-monolithic R.C.C. Door Frames factory manufactured in separate parts and assembled at bolt nuts system with mechanical table vibrating as per IS 6523-1983 with using M25 concrete as per IS 456 with a cross section of 60 mm x 100 mm reinforced with 1.70 kg of TMT steel reinforced with 3 Nos. of 6 mm dia Main TMT bars and 6 mm Dia TMT stirrups welded at 40 em c/c in triangle shape per meter length of door frames, including cost of steel and fabrication charges having 3/4 No. Stainless Steel hinges plate attachment made of 165 mm x 25 mm x 2.5 mm Stainless Steel Flat welded with required iron rods and flats with drilling for fixing flat CSK Head Machine screws and nut made out of 304 grade stainless steel screws, nut and MS square nut of size 8 x 8 square and length 10 mm and making necessary provision in concrete for fixing aldrops, tower bolts and hold fasts etc., complete including two coats of oil based enamel primer providing without cill for shutter thickness upto 30 mm, 21 days tank immersed curing including cost of labour, materials, HOM etc., complete excluding the cost of door Fixtures as per the direction of Engineer (KPWD 18-19,Sl.No.9.98,Pg.No.63 & 64) Second Floor	Rmt	19.80	988.90	19,580	
119.00	Providing and fixing Single shutter glass door of 12mm thick plain toughened glass. The door is fixed by using any approved make hardware fitting like patch fitting, pivot, floor machine, locking arrangements and suitable SS door rails with floral glass etching for 1/3 portion of door area etc complete. The rate includes cost of all materials, labour, hire of tools & machineries, and as per specification.	Sqm	20.16	9,828.50	1,98,143	

Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks
120.00	Providing and fixing of Louvered ventilator made out of multi chambered UPVC (Matching to RAL-9016) sections and with minimum TiO2 (Titanium Dioxide) at 6PHR with TPV (Thermo plastic Vulcanized) and lead free with gaskets -grey colour having isolated drainage and reinforced with Galvanized Iron profile through-out the ventilator frame.The frame having overall size of 39mm x 39mm with GI reinforcement of 1mm thickness.Louver Clip in Aluminium (Powder Coated in white) will be used on the frame along with plastic parts of fixing the 4mm pin head glass.Wall thickness of frame shall be 2mm.Maximum possible size - 1000mm x 1000mm (KPWD 18-19,Sl.No.38.44.2,Pg.No.308)	Sqm	6.75	3,995.20	26,968	
121.00	Providing and fixing 304- grade stainless steel hand rails of 14-gauge pipes for Ramps staircase made out of stainless steel hallow pipes, using 50mm dia for verticals @ 1.60 mtr c/c fixed to the ramps or steps by drilling with bolts and 100mm dia MS base plates 10mm gauge for fixing of Vertical pipes 4 - Nos anchor bolts & 40mm dia pipes fixed horizontally for 2-rows top, one pipes fixed with vertical pipes another one fixed with elbows and 25mm dia pipes are fixed horizontally for 2-rows below top measure@ equal intervals including cutting, welding, bending wherever necessary with suitable caps @ tops, bottoms & corners finishing with mat l shining etc., complete including cost and conveyance of all materials, labour for all items of work, HOM with all lead and lift, loading and unloading, transportation charges and all other incidental charges etc., complete as per specification and directions of the Engineer-in-charge of the work. Ramps or Staircase for physically challenged. (KPWD 18-19,Sl.No.7.39,Pg.No.45)	Sqm	19.20	5,910.30	1,13,478	
122.00	Providing and fixing M.S. Hand railing for Balcony/Staircase etc., with 50mm dia. M.S. hollow pipe of 14 gauge, welded to 20mmx20mm M.S. square rod placed vertically, spaced at 100mm at regular intervals of 600mm. These vertical rods laterally tied to 3 horizontal rods spaced at equal interval. These assembly is fixed to concrete by using expansion bolts and welding the same to reinforcement bars and making good the surface. All the joints and sections should be cut to length, welded and grinded wherever necessary etc., complete. The work includes cost of all materials, labour charges for all items of work, hire charges for welding, cutting and grinding equipment, and electricity charges, etc., complete as per specification and drawing.	Sqm	38.00	3,124.00	1,18,712	
123.00	Providing and fixing anchor bolts as specified in RCC Drawings (KPWD 18-19,Code No.0764)	Kg	1,152.00	44.00	50,688	
124.00	KSRB 8.7-5 : Providing and fixing in position 12mm thick plaster of paris (Gypsum anhydrous) for ceiling reinforced with hessian cloth flat surface with ceiling tiles up to a height of 5 m above floor level over aluminium strips 25mm x 6mm and rendered smooth with plaster of paris including cost of materials, labour, curing complete as per specifications. KPWD 18-19,Sl.No.8.24	Sqm	485.00	1,283.70	6,22,595	
125.00	KSRB 1.11 : Providing and fixing in position aluminium windows and ventilators as per approved drawings with sliding shutters using three track window frame of size 92x31.75mm bottom section 1.3mm thick, weight 1.07kg/m; sides and top sections 1.3 mm, thick, weight 0.933 kg/m.shutter frame section comprising top and bottom section of size 40mmx18mm, wall thickness 1.25mm. weight 0.417 kg./m. shutter side outer 40mmx18mm. wall thickness 1.25mm. weight 0.417 kg/m, shutter interlock section 40mmx26. 7mm wall thickness 1.1 mm. thick, weight 0.469 kg/m, the shutters mounted on nylon rollers with approved quality of fixtures such as aluminium handles tower bolts etc.; providing and fixing 5.5mm. thick plain glass for shutters fitted with rubber beading all aluminium sections including cutting to required length, joints mitred subdividing the frame tenonned and rivetted, in the assembled frame, stiffened with end clips for corners, angles etc., and fixed to the walls, lintels, floor beams/cills as the case may be, with necessary steel screws, raul plugs or teak wood gatties including cutting masonry or concrete and making good the original surface using cement mortar. do- using aluminium section anodized to 12- 15 microns. Ground Floor	Sqm	6.84	4,785.00	32,729	

Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks
126.00	KSRB 1.11 : Providing and fixing in position aluminium windows and ventilators as per approved drawings with sliding shutters using three track window frame of size 92x31.75mm bottom section 1.3mm thick, weight 1.07kg/m; sides and top sections 1.3 mm, thick, weight 0.933 kg/m.shutter frame section comprising top and bottom section of size 40mmx18mm, wall thickness 1.25mm. weight 0.417 kg/m. shutter side outer 40mmx18mm. wall thickness 1.25mm. weight 0.417 kg/m, shutter interlock section 40mmx26. 7mm wall thickness 1.1 mm. thick, weight 0.469 kg/m, the shutters mounted on nylon rollers with approved quality of fixtures such as aluminium handles tower bolts etc.; providing and fixing 5.5mm. thick plain glass for shutters fitted with rubber beading all aluminium sections including cutting to required length, joints mitred subdividing the frame tenonned and rivetted, in the assembled frame, stiffened with end clips for corners, angles etc., and fixed to the walls, lintels, floor beams/cills as the case may be, with necessary steel screws, raul plugs or teak wood gatties including cutting masonry or concrete and making good the original surface using cement mortar. do- using aluminium section anodized to 12- 15 microns. Second Floor	Sqm	27.00	4,798.20	1,29,551	
127.00	Providing , fabricating, assembling and fixing in position Aluminium partition using 101.60mm x 44.45mm x 3.18mm aluminium, mat finish or glossy finish , anodized sections combination of plain, single groove and double groove members should not exceed 0.60mc/c and bottom member of required lengths, joints mitred and corner grinded sub dividing assembled frame should be stiffened with corner angles. Stripped and fixed with screws rawl plug and teakwood guttas to RCC column or masonry on sides. RCC lintels or beams at top and mosaic floor at bottom; including cutting chistelling and making good with cement mortar to match the surface . Providing and fixing 12mm. thick prelaminated sheet (Ecoboard - exterior grade) of approved colour for bottom panel of maximum height 0.9m, and 5.50 mm thick plain or pin headed glass for middle panel and top panel with glazing clips pi 19.05mm.x17.30mm.1.00mm.	Sqm	287.71	2,860.00	8,22,856	
	All the aluminium sections used should be treated for removal of any rust and prevention of further rust formation and coated with greasy materials for non adherence of mortar or any other sticky materials: The vertical members should be embedded in the flooring by making suitable size holes and fixing with cement mortar. All the frame should be thoroughly cleaned free from rust, scale or dirt. work should be carried out as per direction of engineer-in-charge of the work with all lead and lift as per Chief Architect's drawing etc., complete to a degree of perfection. do- using aluminium section powdered coated to a minimum of 60-70 microns with exterior durable pure polyester grade powder of approved quality.					
128.00	Providing and Fixing Handcarving Cornice and Bracket made up of Burma Wood as per the drawings and as instructed by Architect.	Sqm	4.00	6,994.00	27,976	
129.00	Providing precast cement concrete Jali 1:2:4 (1 cement : 2 coarse sand(zone-III) : 4 graded stone aggregate 6mm nominal size), reinforced with 1.6 mm dia mild steel wire, including centering and shuttering, roughening cleaning, fixing and finishing in cement mortar 1:3 (1 cement: 3 fine sand) etc. complete, excluding plastering of the jambs, sills and soffits. 50 mm thick (CPWD 2018,Sl.No.5.18.1,Pg.No.98)	Sqm	20.00	1,474.05	29,481	
130.00	Structural Glazing Works 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). The weight of aluminium extruded section shall be taken for purpose of payment.	Kg	840.00	370.45	3,11,178	

Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks
131.00	Double Glazing Grid: 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: (a) 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:	Sqm	168.00	2,949.30	4,95,482	
	(b) 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. (c) 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.					
	(d) 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 (e) 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					

Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks
	<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 subhead. 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 sqm. up to two decimal places.</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 NABL accredited lab or by any other accreditation body which operates in accordance with ISO / IEC 17011 and accredits labs as per ISO/ IEC 17025.</p>					
	<p>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</p> <p>2. Static Water Penetration Test. (50pa to 1500p) as per ASTM E- 331-09 testing method for a range up to 2000 ml.</p> <p>3. Dynamic Water Penetration (50pa to 1500pa) as per AAMA 501.01- 05 testing method for a range upto 2000 ml</p> <p>4. Structural Performance Deflection and deformation by static air pressure test (1.5 times design wind pressure without any failure) as per ASTM E-330-10 testing method for a range upto 50 mm</p> <p>5. Seismic Movement Test (upto 30 mm) as per AAMA 501.4- 09 testing method for Qualitative test, Tests to be conducted on site.</p> <p>6. Onsite Test for Water Leakage for a pressure range 50 kpa to 240 kpa (35psi) upto 2000 ml</p>					
132.00	<p>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 strengthened 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.</p>	Sqm	168.00	3,250.95	5,46,160	
	<p>(Payment for fixing of IGU Panels in the curtain glazing is included in cost of item No.25.2)</p> <p>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.</p> <p>(i) 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.</p>					
133.00	<p>Providing and Fixing SS 304 Outdoor Dustbin(Pivoted Type and Mounted on SS Poles) of 55 liters capacity all complete to the satisfaction of the Engineer in charge. (NON SOR Item)</p>	Nos.	5.00	7,500	37,500	
134.00	<p>Road Marking with hot applied Thermoplastic Compound with Reflectrising Glass Beads on Concrete Surface: Providing and laying of hot applied thermoplastic compound 2.5mm thick including reflectorising glass beads at 250 gms and 2 ltr of primer per sqm area, thickness of 2.5mm is exclusive of surface applied glass beads as per IRC:35. The finished surface to be level, uniform and free from streak and holes complete as per specifications. MORTH specification No.803 (KPWD 18-19, SI No : 24.15)</p>	Sqm	168.30	472	79,421	

Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks
135.00	Fabricating, providing and erecting in poiston of M S Ornamental security Grill Gate/Fencing on compound wall without hot dip using 75 x 12mm M S Flat for alround frame work with verticals at the centre and horizontal centere support M S Square of 20 x20 mm of different heights as shown in the drawing are to be fixed at 16 cms C/C for suqare bars of full height and at 8cms C / C for bottom rods providg ornamental C I Designers at the botom and C I arrows inthe midle and top. The entire frame work is to be fixed by means of expansion bolts to the brick pillars with necesary drilling holes. the work includes providing two coats of enamel painting over one coatr of red lead ready mix primer coat etc complete cost of all labour, painting, erection charges using hoist pulleycranes with all lead and lift, loading, transporting and unloading using hoist pulley cranes, scaffolding charges and all other incidental charges required for successful completion fo the work as per specification and drawings(KPWD 18-19,Pg.NO.41,Sl.No.7.31)	Kg	396.00	164	64,904	
136.00	Providing and Fixing SS Steel Chairs as specified by Architect.	Nos.	10.00	9,000	90,000	
137.00	P/F FRP Water gully cover with frame (25T) 600mmx500 mm on SWD (Rate analysis attached)	Nos.	47.00	7,912	3,71,877	
138.00	Providing and fixing of S.S. Bollards(SS304) on footpath as specified and directed by Engineer -in-charge (NON SOR Item)	Nos.	20.00	4,500	90,000	
139.00	Supplying and Fixing Passanger elevator of 8 Person Capacity of approved make and as per directed by Engineer in charge. (CPWD Plinth Area Basis Rate-2019)	Nos.	1.00	16,00,000	16,00,000	
140.00	Extra Lead for Disposing off unserviceable materials upto 10 Km beyond initial Lead of 5km Item No 17.4 KSRRB M100-4.1- Debris	Cum	180.02	91.30	16,436	
141.00	Extra Lead for Disposing off unserviceable materials upto 10 Km beyond initial Lead of 5 km Item No 17.4 KSRRB M100-4.1- Earth	Cum	1,115.96	90.86	1,01,396	
142.00	SOIL MIXES and Ground Preparation Supplying and stacking of good earth at site including royalty and carriage upto 5 k.m. lead complete (earth measured in stacks will be reduced by 20% for payment). (Non SOR Item)	Cum	312.35	140.00	43,729	
143.00	KSRRB M300-Supply at site of work well decayed farm yard manure KSRRB M300-11. Supply at site of work well decayed farm yard manure, from any available source, approved by the engineer in charge including screening and stackin complete as per specifications. MORTH Specification No. 308.2(Page No.152,Sl.No.19.90)	Cum	153.85	224.40	34,523	
144.00	KSRRB M300-Horticulture KSRRB M300-Spreading of sludge farm yard manure or/ and good earth KSRRB M300-1. Spreading of sludge farm yard manure or/ and good earth in required thickness (cost of sludge, farm yard manure or/and good earth to be paid for separately) complete as per specifications. MORTH Specification No. 307 (KPWD SR 16-17,Page No.150,Sl No.19.77)	Cum	466.20	113.30	52,820	
145.00	Mixing earth and sludge or manure in the required proportion specified or directed by the Officer-in-charge (Non SOR item)	Cum	466.20	23.91	11,147	
146.00	Soil preparation of Lawn KSRRB M300-3.Making lawns including ploughing and breaking of clod,removal of rubbish,dressing and supplying doobs grass roots and planting at 15 cm apart,including supplying and spreading of farm yard manure at rate of 0.18cum per 100 sqm complete as per specifications. MORTH Specification No.307 (KSRRB 19.80)	Sqm	777.00	17.60	13,675	
147.00	ZOYSIA JAPONICA (MAT) (Non SOR Item)	Sqm	777.00	156.80	1,21,834	
148.00	KSRRB M300- 8.1. Planting and Maintaining of Flowering Plants and Shrubs -A) Planting flowring plants and shrubs in central verge MORTH Specification No. 307	Rm	300.00	50.60	15,180	

Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks
149.00	KSRRB M300-9. Planting of trees by the road side (Avenue trees) in 0.60 m dia holes, 1 m deep dug in the ground, mixing the soil with decayed farm yard/sludge manure, planting the saplings, backfilling the trench, watering, fixing the tree guard and maintaining the plants for one year complete as per specifications. MORTH Specification No. 307 KSRRB M300-Renovation lawns including,weeding,forking the ground, top dressing with forked soil	Nos.	60.00	115.50	6,930	
	LT Panels Fabrication, inspection at works Supply, installation, testing & commissioning of following readymade distribution boards, double door, IP 42 degree protection complete with necessary, MCB isolators , MCBs, earth leakage circuit breaker (ELCB) etc including interconnections with appropriate capacity size of PVC insulated copper conductor wires (ISI marked),suitable for concealed mounting /wall mounting with MS frame work of 40 x 40 x 5 mm MS angle iron, with M.S. enclosure fabricated out of min 16 SWG thick M.S. CRCA sheet with concealed hinged door, locking arrangement etc. including earthing clamps for both incoming & outgoing circuits, interconnections, per phase isolation kit as required,cable end box & wire way box if required, continuous copper earth wire in the wire way box with single/duplicate brass earthing terminals, danger board, name plate, flexible earthing for the door, metal treatment & powder coated painting, Phase Distribution drawing etc. all as per drawings (G.A. & fabrication drawing to be got approved), etc. relevant IS & instruction of Engineer-in-charge. Note:1.MCBs shall be minimum 10 KA breaking capacity (Type –C) 2. Blanking Plates shall be included in scope of work. 3. DB shall be of standard readymade type as per catalouge No. from approved manufacturers as indicated in preferred makes of material. 4. Wire way & cable end box also end & locking plates shall be provided. .					
150.00	5. Routine tests will be conducted at factory in presense of user as per relevant IS All Electrical component should have IS mark Main LT Panel Incomer 1 Nos. 100 Amps TPN MCCB of fault breaking capacity 25KA (Ics=Icu) BUSBARS SECTIONS 100 amps FP, 25kA, 480volts grade busbar chamber of suitable length with Al busbars. All busbars and interconnections shall be of suitable size Al busbar, current density of bus-bars shall not be more than 0.8 Amps/ sq.mm cross sectional area of Bus Bar. OUTGOING 2 Nos. Of 63 A TPN MCB 1 Nos. Of 40 A TPN MCB 1 Nos. Of 25 A TPN MCB 1 Nos. Of 16 A TPN MCB 1 Nos. Of 63 A TPN MCB as SPARE 2 Nos. Of 40 A TPN MCB as SPARE	Set	1	35750.0	35,750	
	LT Panels Fabrication, inspection at works Supply, installation, testing & commissioning of following readymade distribution boards, double door, IP 42 degree protection complete with necessary, MCB isolators , MCBs, earth leakage circuit breaker (ELCB) etc including interconnections with appropriate capacity size of PVC insulated copper conductor wires (ISI marked),suitable for concealed mounting /wall mounting with MS frame work of 40 x 40 x 5 mm MS angle iron, with M.S. enclosure fabricated out of min 16 SWG thick M.S. CRCA sheet with concealed hinged door, locking arrangement etc. including earthing clamps for both incoming & outgoing circuits, interconnections, per phase isolation kit as required,cable end box & wire way box if required, continuous copper earth wire in the wire way box with single/duplicate brass earthing terminals, danger board, name plate, flexible earthing for the door, metal treatment & powder coated painting, Phase Distribution drawing etc. all as per drawings (G.A. & fabrication drawing to be got approved), etc. relevant IS & instruction of Engineer-in-charge. Note:1.MCBs shall be minimum 10 KA breaking capacity (Type –C) 2. Blanking Plates shall be included in scope of work. 3. DB shall be of standard readymade type as per catalouge No. from approved manufacturers as indicated in preferred makes of material. 4. Wire way & cable end box also end & locking plates shall be provided					

Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks
151.00	EXTERNAL LIGHTING PANEL Incomer 1 Nos. 32 Amps TPN MCB BUSBARS SECTIONS 50 amps FP, 25kA, 480volts grade busbar chamber of suitable length with Al busbars. All busbars and interconnections shall be of suitable size Al busbar, current density of bus-bars shall not be more than 0.8 Amps/ sq.mm cross sectional area of Bus Bar. OUTGOING 5 Nos. Of 16 A TPN MCB 3 Nos. Of 16 A TPN MCB as SPARE	Set	2	52014.0	1,04,028	
152.00	Distribution Board Supplying and fixing regular MCB distribution boards on wall/wood board / flushh mouning using required clamps, bolt, nuts etc. with provision for fixing suitable type capacity MCB's single phase / 3 phase / single goor with powder ciated painting. Made out of 14 SWG MS enclosure. III - Double Door 6Way TP & N	Nos.	1	2867.0	2,867	
153.00	Distribution Board Supplying and fixing regular MCB distribution boards on wall/wood board / flushh mouning using required clamps, bolt, nuts etc. with provision for fixing suitable type capacity MCB's single phase / 3 phase / single goor with powder ciated painting. Made out of 14 SWG MS enclosure. III - Double Door 8Way TP & N	Nos.	1	3585.0	3,585	
154.00	Distribution Board Supplying and fixing regular MCB distribution boards on wall/wood board / flushh mouning using required clamps, bolt, nuts etc. with provision for fixing suitable type capacity MCB's single phase / 3 phase / single goor with powder ciated painting. Made out of 14 SWG MS enclosure. III - Double Door 12Way TP & N	Nos.	2	5138.0	10,276	
155.00	Supplying & fixing miniature circuit breakers on existing MCB distribution boards using necessary fixing materials and "C" Type curve, indicator ON/OFF, energy cross-3 with short circuit breaking capacity of 10K and complete wiring as required confirming to IEC 60898 5-32Amps SP	Nos.	114	418.0	47,652	
156.00	Supplying & fixing miniature circuit breakers on existing MCB distribution boards using necessary fixing materials and "C" Type curve, indicator ON/OFF, energy cross-3 with short circuit breaking capacity of 10K and complete wiring as required confirming to IEC 60898 5-32Amps TPN	Nos.	1	1547.0	1,547	
157.00	Supplying & fixing miniature circuit breakers on existing MCB distribution boards using necessary fixing materials and "C" Type curve, indicator ON/OFF, energy cross-3 with short circuit breaking capacity of 10K and complete wiring as required confirming to IEC 60898 40-63Amps TPN	Nos.	3	1936.0	5,808	
158.00	Supplying fixing and wiriing Earth Leakage Miniature Circuit Breaker (ELMCB) 240/450V upto 300mA sensitivity on existing wood/panel board. 16-25 Amps 2Pole	Nos.	1	2412.0	2,412	
159.00	Supplying fixing and wiriing Earth Leakage Miniature Circuit Breaker (ELMCB) 240/450V upto 300mA sensitivity on existing wood/panel board. 32-40 Amps 2Pole	Nos.	3	2623.0	7,869	
160.00	Supplying fixing and wiriing Earth Leakage Miniature Circuit Breaker (ELMCB) 240/450V upto 300mA sensitivity on existing wood/panel board. 63A TPN ISOLATOR	Nos.	1	5396	5,396	
161.00	Supplying fixing and wiriing Earth Leakage Miniature Circuit Breaker (ELMCB) 240/450V upto 300mA sensitivity on existing wood/panel board. 40A TPN ISOLATOR	Nos.	1	7010	7,010	
162.00	LT Cable Supplying and laying the following XLPE insulated 1.1 KV grade, FRLS (outer sheath only), armoured/flexible and overall sheathed copper/aluminium conductor cables made to IS: 7098 (Part-I) 1988. 3.5C x 50sq.mm Al Arm Cable	Mtr	80	265.0	21,200	

Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks
163.00	Supplying, erecting & terminating XLPE armoured cable 4 core 16 sq. mm. copper conductor continuous 5.48 sq. mm. (12 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/ pole or laid in provided trench/ pipe as per specification no. CB-LT/CU	Mtr	50	734.0	36,700	
164.00	Supplying, erecting & terminating XLPE armoured cable 4 core 6 sq. mm. copper conductor continuous 5.48 sq. mm. (12 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/ pole or laid in provided trench/ pipe as per specification no. CB-LT/CU	Mtr	160	336.0	53,760	
165.00	Supplying, erecting & terminating XLPE armoured cable 4 core 4 sq. mm. copper conductor continuous 5.48 sq. mm. (12 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/ pole or laid in provided trench/ pipe as per specification no. CB-LT/CU	Mtr	1050	251.0	2,63,550	
166.00	LT Cable Termination Supplying and fixing of heavy duty cable glands suitable for UG cable of 1.1KV class (metal only) 32mm dia 2.5mm thick	Each	1	122.0	122	
167.00	Supplying tinned copper lugs and crimping and wiring to terminal point for wire of the following sizes. 16 sqmm	Each	1	11.3	11	
168.00	Supplying tinned copper lugs and crimping and wiring to terminal point for wire of the following sizes. 50 sqmm Long barrel	Each	3	62.4	187	
169.00	Cable Laying Labour charges for laying of 1.1KV class UG cable in existing trench/GI pipe/ stoneware pipe/ on wall/ on pole as required. in existing trench/duct 6 to 16 sqmm	Mtr	1000	10.8	10,800	
170.00	Cable Laying Labour charges for laying of 1.1KV class UG cable in existing trench/GI pipe/ stoneware pipe/ on wall/ on pole as required. in existing trench/duct 25 to 75 sqmm	Mtr	60	16.2	972	
171.00	Cable Laying Labour charges for laying of 1.1KV class UG cable in existing trench/GI pipe/ stoneware pipe/ on wall/ on pole as required. on wall structure 6 to 16 sqmm	Mtr	100	31.0	3,100	
172.00	Digging of trench of 0.6m deep X 0.5 m wide refilling the trench to the required ground level and consolidating etc., complete (As per Civil SR KSRB i-2, P-7) In soil (ordinary)	Mtr	400	78.0	31,200	
173.00	Networking & Telecommunication Supply & Drawing UTP-CAT6E LAN Cable	Rmt	500	23.00	11,500	
174.00	Supply & Fixing of switch mounting rack with power manager & Cable manager 9U with 450mm depth	Nos	1	6593.00	6,593	
175.00	Supply fixing of Network Switches 48 Port Gigabyte (Manageble)	Nos.	1	34815.00	34,815	
176.00	Supplying & fixing of I/O socket with box Double I/O	Nos.	1	590.00	590	
177.00	Supplying & fixing ofmtr Cat6 Patch cable 3mtr	Nos.	52	337.00	17,524	
178.00	Supply & fixing of Patch panel for LAN cabling 48 Port 10/100 patch Panel	Each	1	13082.00	13,082	
179.00	Supplying and drawing PVC flexible one pair telephone unarmoured tinned copper cables 2 Pair	Mtr	120	13.00	1,560	
180.00	Crone Box 30 Pair Crone Box	1	1	1000.00	1,000	
181.00	UPS Supply, installation, testing and commissioning of ON - line UPS system with Batteries for 1/2 hour backup. UPS capacity:- 1 Nos. x 20 kVA.-PRS mode 3Ph-3Ph. with Batteries 6 x 80Ah volt and other accesories to complete the job	Nos	1	400000	4,00,000	
182.00	Cable Tray & Raceway Supplying & fixing 2mm thick galvanized perforated tray with powder coated paint on exisiting MS angle support using necessary GI bolts/nuts and washer or welding as required. 150 X 50 mm	Mtr	30	440.0	13,200	

Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks
183.00	Cable Tray & Raceway Supplying & fixing 2mm thick galvanized perforated tray with powder coated paint on existing MS angle support using necessary GI bolts/nuts and washer or welding as required. 300 X 50 mm	Mtr	10	547.0	5,470	
184.00	Raceways & Accessories Supply and installation of single or multi compartment GI raceway of cross section given below laid in floor complete as specified. a) Raceway b) All bends, joints, supports, end plates couplers earth conductivity. 300 x 50 Double compartment	Rmt	20	1215.0	24,300	
185.00	Raceways & Accessories Supply and installation of single or multi compartment GI raceway of cross section given below laid in floor complete as specified. a) Raceway b) All bends, joints, supports, end plates couplers earth conductivity. 150 x 50 Single compartment	Rmt	100	590.0	59,000	
186.00	Providing and fixing of 2 mm thick pregavanised sheet outlet junction box including providing cover with provision to adjust overall height, knock outs on four sides to accept raceways of specified sizes and cutouts to fix required outlets for following size of race ways. 300 mm wide x 40 mm deep raceway with 3/2/1 compamtments	Nos	4	2500.0	10,000	
187.00	Providing and fixing of 2 mm thick pregavanised sheet outlet junction box including providing cover with provision to adjust overall height, knock outs on four sides to accept raceways of specified sizes and cutouts to fix required outlets for following size of race ways. 150 mm wide x 40 mm deep single compatment raceway	Nos	8	2000.0	16,000	
188.00	Light Fixture Supply of 2'x2' LED recessed luminaire with... Watts system wattage. Housing shall be with pressure die cast aluminum alloy with corrosion proof resistant polyester power coated. Driver operates with voltage range from 100V to 270V 50/60 Hz with short circuit, overload & mis-wiring protection. Lumen maintenance of 70% at 50000Hrs. Injection moulded polycarbonate diffuser for better mwchanical stability, light transmission & avoid pot hole effect. Junction temp. shall be <70 degree Celsius. Driver is on constant current driver @0.06A with PF > 0.92 with line voltage@ 220-240V @ 50/60Hz, driver effeciency > 85% & THD <15%. LED Efficiency > 130lm/W at 1W & fixture effeciency >75lm/W with CRI >75 with injection moulded polycarbonate lens with <80mm depth. 5years Warranty against any manufacturing defect working under standard electrical condition. LED modulear down light 2' x 2' -36watts	Each	31	8242.0	2,55,502	
189.00	Supply of LED square recessed downlighter with 18 W system wattage. Housing shall be with powder coated pressure die cast aluminium alloy with corrsion resistant polyester powder coat & with extended heat sink. Diffuse/cover made of lexan plastic material. rated life shall be L70 @ 50000 Hrs ehich shall has inbuilt electrical protection like over/under voltage, short circuit, overload, open circuit & miswiring. Driver is in constant current driver output driver at 0.06A with PF> 0.9 with line voltage at 220-240V @ 50/60Hz, driver efficiency > 85% & THD <15%. LED Efficiency > 130 lm/W at 1 W & fixture efficiency > 75 lm/W with CRI > 75 with injection moulded polycarbonate lens. 5years Warranty against any manufacturing defect working under standard electrical condition.	Each	32	4945.0	1,58,240	
190.00	Supply of recess mounted rolling tpye LED square or round downlighter 12 Watts with 4/6W GU 10 LED Lamp Rib fabricated from Die cast Iron aluminium with white powder coated prewired to mains connector with suitable driver & having swiveling unit of aluminium die cast eye ball & LED lamp position retained by circular wire spring. 5years Warranty against any manufacturing defect working under standard electrical condition.	Each	8	1868.0	14,944	
191.00	11W Bulkhead Supplying and erecting bulkhead fitting suitable for upto LED upto 12W fixed on wall. As per specification no. FG-IDF/BHF	Nos.	3	221.0	663	
192.00	70 W LED COB Downlighter for Extra high ceiling	Nos	4	5985.0	23,940	

Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks
193.00	Supplying of LED floodlight withW system power consumption pressure die cast aluminum housing with powder coating with IP 65 protection 1, 200-275V voltage with electronic driver, PF>0.9, should meet ANSI 2G vibration test, compliance to UL/CE with class I. System rating shall be 50K hrs @ Lumen maintenance of 70% system efficiency > 80lm/w. Over load & short circuit protection ensure reliable operation in spite of problem in output side. Compliance to IS 10322/IEC60598, LM 79 & LM 80 Adherence with RoHS, UL approved MCPCB. Top access street light with single screw to ensure ease of maintenance at the sight site location with minimized minimal tools. Light fixture with ... W system power consumption. LED efficiency > 130lm/W at 1W & fixture efficiency > 80lm/w with nominal CRI > 75. Luminaire manufacture should have in-house facility accredited by NABL/CPRI & any government certified agency & design & development facility certified by ISO 9001:2008. Housing with supplier word mark / name shall be Engraved / Embossing on the die cast housing / body part. Warranty of 5 years against any manufacturing defect working under standard electrical conditions as mentioned above should be given by LED manufacturer. LED Floodlight 60W	Nos	2	7129.0	14,258	
194.00	Supply, installation, testing & commissioning of LED weatherproof street light fixture suitable for mounting on suitable dia pipe at any angle between lateral (side entry) and vertical (top mounted), prewired with led driver for 240V, 50Hz single phase AC supply, compliant to IP 65 protection grade, and all other necessary components and accessories to finish the job. 40W LED light fixture	Nos.	40	2931	1,17,240	
195.00	Fabricating, supply, erection of ___mtr long hot dip galvanized Octagonal pole with BSEN 10025 grade S 355 jo steel plate shaft IS 2062 for base plate with door opening arrangement, including suitable boards, Backelite sheet and MCB as per IS specification and suitable to withstand wind speed of 47 m/sec for ___mtr pole in single section and single joint welded as per IS 9595/IS 10178 AWS having dimension bottom ___mm and top ___ mm with 3 mm thick, suitable base plate and 4 nos of long J bolt along with templet and the pole shall be hot dip galvanized in single dipping with not less than 65 micron as per ASTM - A123 and 153 etc. excluding foundation as per drawing 7 meter- top 70 mm and bottom 130 mm dia (SOR Item No - 5.14, 5.14.1) 7 meter - Top 70mm and bottom 130mm dia	Nos.	40	12420	4,96,800	
196.00	Supplying and fixing of hot deep Galvanized M.S. Bracket suitable for outdoor luminaries and mounted on Octagonal pole using necessary bolt, nuts etc., complete. Single arm Bracket with 1000mm standard 40/50mm dia	Nos.	40	1919	76,760	
197.00	Bollard Lights Supply, installation, testing & commissioning of LED Bollard lights prewired with led driver operated on 240V, 50Hz single phase AC supply, compliant to IP 66 protection grade and with all other necessary components and accessories to finish the job. (For Garden Lighting) 10 - 12W LED light fixture	Nos.	34	2205	74,970	
198.00	Point Wiring, Switch Sockets & Accesories OPEN CONDUIT SYSTEM Supply heavy gauge PVC conduit pipe ... dia ... mm thick confirming to IS 2509 with suitable size bends, junction boxes, adhesive paste etc., and fixing using inverted wood plugs in case of RCC ceiling and RCC wall / stone structure or rawl plugs in case of brick walls and cement plastering the damaged portion using heavy gauge saddles at an interval of 700mm using NF screws 25mm dia 2mm thick	Mtr	200	70.0	14,000	
199.00	Point Wiring, Switch Sockets & Accesories OPEN CONDUIT SYSTEM Supply heavy gauge PVC conduit pipe ... dia ... mm thick confirming to IS 2509 with suitable size bends, junction boxes, adhesive paste etc., and fixing using inverted wood plugs in case of RCC ceiling and RCC wall / stone structure or rawl plugs in case of brick walls and cement plastering the damaged portion using heavy gauge saddles at an interval of 700mm using NF screws 32mm dia 2.5mm thick	Mtr	100	100.0	10,000	

Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks
200.00	Supply heavy gauge PVC conduit pipe ... dia ... mm thick confirming to IS 2509 with suitable size bends, junction boxes, adhesive paste etc., and running before concreting the slab. The conduit should be tied to the reinforcement rods by using binding wires and unused ways of junction boxes and pipe ends should be covered using PVC and enclosures, run with 18SWG GI fish wire wherever necessary 25mm dia 2mm thick	Mtr	100	57.0	5,700	
201.00	Supply heavy gauge PVC conduit pipe ... dia ... mm thick confirming to IS 2509 with suitable size bends, junction boxes, adhesive paste etc., and running before concreting the slab. The conduit should be tied to the reinforcement rods by using binding wires and unused ways of junction boxes and pipe ends should be covered using PVC and enclosures, run with 18SWG GI fish wire wherever necessary 32mm dia 2.5mm thick	Mtr	100	90.0	9,000	
202.00	POINT WIRING USING COPPER WIRE Wiring for light/power circuit using one of FRLS PVC insulated 1100V grade, multistanded copper with low conductor resistance single core in open or concealed system of wiring with specified IS-694:1990 & confirming to GTP of GROUP-A. 1.5 sqmm	Mtr	2200	18.6	40,920	
203.00	POINT WIRING USING COPPER WIRE Wiring for light/power circuit using one of FRLS PVC insulated 1100V grade, multistanded copper with low conductor resistance single core in open or concealed system of wiring with specified IS-694:1990 & confirming to GTP of GROUP-A. 2.5 sqmm	Mtr	1400	29.2	40,880	
204.00	POINT WIRING USING COPPER WIRE Wiring for light/power circuit using one of FRLS PVC insulated 1100V grade, multistanded copper with low conductor resistance single core in open or concealed system of wiring with specified IS-694:1990 & confirming to GTP of GROUP-A. 4 sqmm	Mtr	1100	42.1	46,310	
205.00	SWITCH, SOCKETS & ACCESSORIES Switch, socket, data & telephone points Supply and flush mounting powder coated/ galvanised metal box suitable for mounting modular switch plated. The box should be firmly flush mounted after due groove cutting in Brick/Stone/C.C wall 1-3 Way	Each	31	91.0	2,821	
206.00	SWITCH, SOCKETS & ACCESSORIES Switch, socket, data & telephone points Supply and flush mounting powder coated/ galvanised metal box suitable for mounting modular switch plated. The box should be firmly flush mounted after due groove cutting in Brick/Stone/C.C wall 6 Way	Each	108	121.0	13,068	
207.00	Supply and fixing superior quality modular switch mounting polycarbonate plate with necessary supporting back plate with required nos. of machine screws, bolts nuts etc., complete on the the existing metal/PVC box 1 to 3 Module	Each	31	109.0	3,379	
208.00	Supply and fixing superior quality modular switch mounting polycarbonate plate with necessary supporting back plate with required nos. of machine screws, bolts nuts etc., complete on the the existing metal/PVC box 6 Module	Each	108	173.0	18,684	
209.00	Supply and fixing of modular switch/ socket/ stepped electronic fan regulator/ dimmer/ telephone socket etc on existing modular switch plate as per IS 3854 & IS 1293 6 amp one Way	Each	5	63.0	315	
210.00	Supply and fixing of modular switch/ socket/ stepped electronic fan regulator/ dimmer/ telephone socket etc on existing modular switch plate as per IS 3854 & IS 1293 6 amp 3Way Socket	Each	5	95.0	475	
211.00	Supply and fixing of modular switch/ socket/ stepped electronic fan regulator/ dimmer/ telephone socket etc on existing modular switch plate as per IS 3854 & IS 1293 16 Amp one way switch	Each	109	114.0	12,426	
212.00	Supply and fixing of modular switch/ socket/ stepped electronic fan regulator/ dimmer/ telephone socket etc on existing modular switch plate as per IS 3854 & IS 1293 6/16 Amps Universal Socket	Each	109	147.0	16,023	
213.00	Supply and fixing of modular switch/ socket/ stepped electronic fan regulator/ dimmer/ telephone socket etc on existing modular switch plate as per IS 3854 & IS 1293 TV / Telephone Socket	Each	26	82.0	2,132	

Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks
214.00	Supply and fixing of modular switch/ socket/ stepped electronic fan regulator/ dimmer/ telephone socket etc on existing modular switch plate as per IS 3854 & IS 1293 RJ45/IO Outlet	Each	26	204.0	5,304	
215.00	GI EARTHING Earthing with G.I. earth pipe 4.5 metre long, 40 mm dia including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe etc. with charcoal/ coke and salt as required.	Each	14	5308.0	74,312	
216.00	Earthing with copper earth plate 600 mm X 600 mm X 3 mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 metre long etc. with charcoal/ coke and salt as required.	Each	2	11794.0	23,588	
217.00	Supplying and laying 25 mm X 5 mm G.I strip at 0.50 metre below ground as strip earth electrode, including connection/ terminating with G.I. nut, bolt, spring, washer etc. as required. (Jointing shall be done by overlapping and with 2 sets of G.I. nut bolt & spring washer spaced at 50mm)	Metre	500	131.0	65,500	
218.00	Supplying and laying 25 mm X 5 mm copper strip at 0.50 metre below ground as strip earth electrode, including connection/ terminating with nut, bolt, spring, washer etc. as required. (Jointing shall be done by overlapping and with 2 sets of brass nut bolt & spring washer spaced at 50mm)	Metre	40	853.0	34,120	
219.00	GI wire Supplying and running GI/Copper conductor for grounding and (along with other wires in conduit sysytem of wiring) using necessary suitable size clamps, nails, guttas/spacers, etc. 8 SWG	Mtr	150	19.5	2,925	
220.00	Supply, Installation, testing and commissioning of 6W Ceiling Speaker with max 1M/1W 96DB . Frequency response of 80Hz-20KHz with a dispersion angle of 160 deg.	No	13	1780	23,140	
221.00	Supply, Installation, testing and commissioning of 15W Wall mount Horn Speaker	No	2	10132	20,264	
222.00	Supply, Installation, testing and commissioning 2Core, 1.5 sq. mm Screened Multi-Stranded, Bare Copper Conductor, PVC Insulated cable as per IS 694-1990	Mtr	350	51	17,850	
223.00	Supplying heavy gauge PVC conduit pipe below mention mm dia and thick conforming to IS 2509 with suitable size bends, metal/PVC junction boxes, adhesive paste etc. and running before concreting the slab. The conduit should be tied to the reinforcement rods by using binding wires and unused ways of junction boxes and pipe ends should be covered using PVC end enclosures, run with 18 swg fish wire wherever necessasary 25 mm dia 2 mm thick	Mtr.	200	70	14,000	
224.00	Supplying, installation, testing & commissioning of intelligent addressable duct detector including suitable Photo detector complete with base as required.	Nos.	25	7801	1,95,025	
225.00	Supplying, installation, testing & commissioning of response indicator on surface/recessed MS Box having two LED, metallic cover complete with all connections etc as required.	Nos.	7	263	1,841	
226.00	Supplying, installation, testing & commissioning of intelligent addressable thermal detector with rate of rise cum fixed tempreature thermistor complete with base as required.	Nos.	1	2713	2,713	
227.00	Supplying, installation, testing & commissioning of addressable manual call point complete as required.	Nos.	3	3859	11,577	
228.00	Supplying, installation, testing & commisssioning of intelligent addressable programmable sounder complete as required.	Nos.	3	2638	7,914	
229.00	Supplying, installation, testing & commissioning of addressable strobe complete as required.	Nos.	3	3354	10,062	
230.00	Supplying and erecting UPVC conduit 25 mm in dia. conforming to I.S. with required number of couplings, PVC bushes, check nuts etc. complete.	RM	300	58	17,400	
231.00	Supplying & laying of 2x1.5 sqmm fire alarm armoured cable, 600/1000V rated with annealed copper conductor having XLPE insulation, steel wire armouring & FRLS outer sheath complete as required.	RM	350	141	49,350	
232.00	Supplying and erecting ABC Dry Chemical Powder type Fire extinguisher 4 kg capacity cartridge tyB with gun metal cap 150 gram CO2 gas cartridge powder and brackets conforming to IS 2171-1985 and complete erected with necessary clamps made from 50x6mm MS flat with nuts and bolts grouted in wall complete	Nos.	5	4788	23,940	

Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks
233.00	SANITARYWARE & FITTINGS Providing and fixing white vitreous china clay, water closet European type (Pedestal type, P-trap) with black solid plastic seat and lid, C. P brass hinges, rubber buffers, 10 litre low level, PVC flushing cistern (all are approved make) with fittings, C. I I M.S brackets, 40mm diameter flush bend with fittings and clamps, overflow arrangements with special and 25mm mosquito proof coupling of approved design, painting of fittings and brackets, cutting and making good the wall and floor wherever required, including cost of materials, labour complete as per specifications.	Nos.	8	4956	39,648	
234.00	Providing and fixing C.P. brass bib cock of approved quality conforming to IS:8931 15 mm nominal bore	Nos.	8	418.95	3,352	
235.00	Providing and fixing Hand shower (health faucet) with 8mm dia. 1m long flexible tube having wall hook with approved make including necessary sockets/ union nut etc. complete as directed by Engineer in charge.	Nos.	8	1677	13,416	
236.00	Providing and fixing white vitreous china clay, flat back wash basin size 550x400mm with a pair of 15mm C.P brass pillar taps with C.I I M.S brackets, 32 mm C. P. brass waste of standard pattern, painting of fittings and brackets, cutting and making good the wall and floor wherever required, including cost of materials, labour complete as per specifications size 550 x 400mm	Nos.	8	3879	31,032	
237.00	Providing vitreous china clay toilet paper holder with a pack of papers as per specification	Nos.	8	414	3,312	
238.00	Supplying and fixing of UPVC WC connector (straight or bend type) with rubber lip ring. Including 110 mm dia UPVC pipe of required length and proper connection complete as required.	Nos.	8	864	6,912	
239.00	Providing gun metal pillar cocks 15mm dia of I class conforming to ISI specifications and fixing them in position as per directions including of cost of materials and fixtures and conveyance to spot	Nos.	4	242	968	
240.00	Providing and fixing PTMT Waste Coupling for sink, of approved quality and colour. Waste coupling 31 mm dia of 79 mm length and 62mm breadth weighing not less than 45 gms	Nos.	8	99.75	798	
241.00	Providing and fixing CP Brass 32mm size Bottle Trap of approved quality & make and as per the direction of Engineer-in-charge.	Nos.	8	883.05	7,064	
242.00	Providing and fixing 600x450mm bevel Lead edge mirror of superior glass with 6mm hard board backing and fixed to wooden cleats with C.P screws, washers, including cost of materials, labour complete as per specifications.	Nos.	8	1157	9,256	
243.00	Providing and fixing liquid soap glass dispenser and holder as per design.	Pair	8	145	1,160	
244.00	INTERNAL WATER SUPPLY SYSTEM Providing and fixing Chlorinated Poly-Venyl Chloride (CPVC) pipes conforming to IS 15778, having thermal stability for hot and cold water supply including all CPVC plain and brass threaded fittings including fixing the pipe with clamp at 1.00 mtr spacing. This includes jointing of pipes and fittings with one step CPVC solvent cement & the cost of cutting chases & making good the same including testing of joints complete as per specifications.. (Concealed work including cutting chases and good the walls etc.) 15mm nominal OD pipes	Rmt	62	206	12,772	
245.00	INTERNAL WATER SUPPLY SYSTEM Providing and fixing Chlorinated Poly-Venyl Chloride (CPVC) pipes conforming to IS 15778, having thermal stability for hot and cold water supply including all CPVC plain and brass threaded fittings including fixing the pipe with clamp at 1.00 mtr spacing. This includes jointing of pipes and fittings with one step CPVC solvent cement & the cost of cutting chases & making good the same including testing of joints complete as per specifications.. (Concealed work including cutting chases and good the walls etc.) 20mm nominal OD pipes	Rmt	5	235	1,175	

Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks
246.00	INTERNAL WATER SUPPLY SYSTEM Providing and fixing Chlorinated Poly-Vinyl Chloride (CPVC) pipes conforming to IS 15778, having thermal stability for hot and cold water supply including all CPVC plain and brass threaded fittings including fixing the pipe with clamp at 1.00 mtr spacing. This includes jointing of pipes and fittings with one step CPVC solvent cement & the cost of cutting chases & making good the same including testing of joints complete as per specifications.. (Concealed work including cutting chases and good the walls etc.) 25mm nominal OD pipes	Rmt	56	293	16,408	
247.00	INTERNAL WATER SUPPLY SYSTEM Providing and fixing Chlorinated Poly-Vinyl Chloride (CPVC) pipes conforming to IS 15778, having thermal stability for hot and cold water supply including all CPVC plain and brass threaded fittings including fixing the pipe with clamp at 1.00 mtr spacing. This includes jointing of pipes and fittings with one step CPVC solvent cement & the cost of cutting chases & making good the same including testing of joints complete as per specifications.. (Concealed work including cutting chases and good the walls etc.) 32mm nominal OD pipes	Rmt	30	374	11,220	
248.00	Providing and fixing gun metal wheel valve conforming to IS specification of approved make as per directions including all lead and lift etc., complete. 15mm dia	Nos.	2	395	790	
249.00	Providing and fixing gun metal wheel valve conforming to IS specification of approved make as per directions including all lead and lift etc., complete. 20mm dia	Nos.	2	414	828	
250.00	Providing and fixing gun metal wheel valve conforming to IS specification of approved make as per directions including all lead and lift etc., complete. 25mm dia	Nos.	12	447	5,364	
251.00	Providing and fixing gun metal wheel valve conforming to IS specification of approved make as per directions including all lead and lift etc., complete. 32mm dia	Nos.	12	486	5,832	
252.00	Providing and fixing gun metal wheel valve conforming to IS specification of approved make as per directions including all lead and lift etc., complete. 40mm dia	Nos.	8	562	4,496	
253.00	Providing and fixing gun metal wheel valve conforming to IS specification of approved make as per directions including all lead and lift etc., complete. 50mm dia	Nos.	4	734	2,936	
254.00	Supplying, fixing, testing and commissioning of butterfly valve of PN 1.6 rating with bronze/gunmetal seat duly ISI marked complete with nuts, bolts, washers, gaskets conforming to IS 13095 of following sizes as required : 50 mm	Set	6	3671	22,026	
255.00	Supplying, fixing, testing and commissioning of butterfly valve of PN 1.6 rating with bronze/gunmetal seat duly ISI marked complete with nuts, bolts, washers, gaskets conforming to IS 13095 of following sizes as required : 65 mm	Set	1	4149	4,149	
256.00	Providing, installation, testing and commissioning of non-return valve of following sizes conforming to IS: 5312 complete with rubber gasket, GI bolts, nuts, washers etc. as required : 50 mm	Set	4	2800	11,200	
257.00	Providing, installation, testing and commissioning of Gun metal Y-strainer fabricated out of 1.6 mm thick stainless steel, Grade 304, sheet with 3 mm dia holes with stainless steel flange. 50 mm	Each	2	3200	6,400	
258.00	Supplying and installing pressure gauge of 100 mm dia., 0-300 PSI or 0-14 kg per cm square fitted with 12/15 mm dia. pad cock valve, and G.I. pipe, elbow etc. complete as per specification no. FF-FFA/PG	Each	2	657	1,314	
259.00	Providing and fixing in position brass ball valve high or low pressure with plastic float of approved quality nominal bore including cost of all materials, labour and HOM with all leads complete as per specifications. 25 mm dia nominal	Nos.	5	513	2,565	
260.00	Supplying Installing, testing and commissioning of Gun metal AIR RELEASE VALVE SIZE OF 25mm dia including cost of materials, labour, HOM complete as per specifications.	Nos.	4	1875	7,500	

Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks
261.00	Providing & fixing PVC Vent Cowl 110 mm	Nos.	2	450	900	
262.00	Providing & fixing PVC Vent Cowl 65 mm	Nos.	2	320	640	
263.00	EXTERNAL WATER SUPPLY SYSTEM Providing and fixing in trenches galvanised IS 1239 C class pipe nominal bore with all fittings (earth work in trenches to be measured and paid for separately) including cost of all materials, labour charges, HOM of equipments and testing complete as per specifications. 50 mm dia	Rmt	22	388	8,536	
264.00	Providing and fixing water meter with stop cock, jam nut, socket in G. I pipe line including cutting and threading the pipe and making long screws including cost of all materials, labour, HOM and testing complete as per specifications.	Set	1	1320	1,320	
265.00	INTERNAL DRAINAGE SYSTEM Providing and fixing SWR pipes 6 kg/sq.cm B class working pressure with pipe fittings, support, including cost of all materials, labour charges, HOM of equipment and testing complete as per specifications. IS 13592 do- with 110mm outer dia	Rmt	65	750	48,750	
266.00	INTERNAL DRAINAGE SYSTEM Providing and fixing SWR pipes 6 kg/sq.cm B class working pressure with pipe fittings, support, including cost of all materials, labour charges, HOM of equipment and testing complete as per specifications. IS 13592 do- with 160mm outer dia	Rmt	50	1150	57,500	
267.00	Providing and fixing SS Nahani trap of approved make conforming to ISI specifications and construction of Cistern in M15 as directions (Rate is inclusive of cost of materials and fixtures and conveyance of materials to work spot). 12.5 cms x 7.5 cms	Each	4	1120	4,480	
268.00	Supplying & Fixing in position 100 mm dia UPVC Multi traps of self cleaning design including 125 mm dia brass C.P. grating, jointing, embedding in concrete etc. complete. Rate to include making of opening in floor, marble / tiles, for fixing C.P gratings, extension connector as required, complete.	Nos.	9	1520	13,680	
269.00	Providing and fixing PVC Gully Trap as per specification 300 X 300	Nos.	3	1150	3,450	
270.00	EXTERNAL DRAINAGE SYSTEM Inspection Chamber Constructing brick masonry inspection chamber internal dimensions 450x450mm, (clear inside dimension) for pipeline with three or more inlets, using table moulded non-modular bricks of class designation 50 in cement mortar 1:5, C. I cover with frame (Heavy duty) total weight of cover with frame to be not less than 125 kg (weight of cover 23kg and weight of frame 15 kg) R.C.C. top slab with cement concrete M 15 with 20mm and downsize granite metal , foundation concrete M 5 with 40mm and downsize granite metal inside plastering 12mm thick with cement mortar 1:3, finished smooth with a floating coat of cement on walls and bed concrete complete as per standard design including cost of materials, labour charges, curing complete as per specifications. (Depth up to 600- 1500 mm)	Nos.	1	8900	8,900	
271.00	Constructing brick masonry inspection chamber internal dimensions 450x900mm, (clear inside dimension) for pipeline with three or more inlets, using table moulded non-modular bricks of class designation 50 in cement mortar 1:5, C. I cover with frame (Heavy duty) total weight of cover with frame to be not less than 125 kg (weight of cover 23kg and weight of frame 15 kg) R.C.C. top slab with cement concrete M 15 with 20mm and downsize granite metal , foundation concrete M 5 with 40mm and downsize granite metal inside plastering 12mm thick with cement mortar 1:3, finished smooth with a floating coat of cement on walls and bed concrete complete as per standard design including cost of materials, labour charges, curing complete as per specifications. (Depth up to 600- 1500 mm)	Nos.	6	12500	75,000	

Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks
272.00	Water Tank Providing and fixing H.D.P container Syntex or alike one piece moulded water tank made out of high density polythylar and built corrugated inclusive of delivery up to destination hoisting and fixing of accessories such as inlet,outlet overflow pipe inclusive of all tanks capacity Capacity- 5000 ltr	Unit	1	60000	60,000	
273.00	Pumps Supply, installation, testing & commissioning of Submersible pumps (1 working + 1 standby) with 10 mm thick solid handling capacity. C.I body with built in strainer & SS 304 impeller, coupled to motor suitable for operation on 430 V 3 pH 50 Cycle A/C power supply and lifting arrangement including complete as required. Automatic Electric control panel with change over switch, relays, electrical wiring, cabling from panel to pumps, level controller complete with all accessories as per manufacturer specifications Accessories like NRV's valves on discharge and valve and strainer in suction line, header for suction and delivery side, required cut pieces of pipes, fittings, flanges, pressure gauge, base frame and concrete foundation complete as required. Flow rate : 3 LPS (1 Working +1 Standby) Head : 35 Mts Purpose : Water Transfer from UGT to OHT Location : Underground Tank	Nos.	2	105000	2,10,000	
274.00	Variable Refrigerant Flow system VRF UNIT Supply, Installation, Testing & Commissioning of modular type Variable Refrigerant Volume Air Cooled Outdoor Units suitable for cooling and heating, having all hermetically sealed inverter type scroll compressor, minimum two compressors for above 14HP modules , microprocessor based controller , top discharge type condensing units , with R 410A refrigerant , vibration isolators with suitable foundation etc. complete as required. The unit shall deliver the rated capacity at AHRI Conditions & work even at 50 ° C ambient temperature without tripping. The unit shall be suitable to work on 400V +/- 10%, 3 Phase, 50Hz AC power supply. The unit shall be filled with first charge of refrigerant and ready for use as required. The COP at AHRI conditions shall not be less than 3.1 and EER not less than 6.5. 10 HP outdoor unit	Nos.	1	164150	1,64,150	
275.00	Supply,installation,testing andcommissioning of following minimum capacity 4 way flow VRV/VRF Cassette Type Indoor ceiling mounted unit equipped with synthetic washable media pre-filter, fan section with low noise fan/dynamically balanced blower,multi speed motor, coil section with DX Copper coil, electronic expansion valve,outer cabinet, drain pump,grill, necessary supports, vibration isolation, cordless remote controletc.,suitable for operation on single phase 230V±10%, 50HzAC supply, complete, as required.The units shall have automatic force shutdown provision in case of fire on receiving signal from BMS System. The cooling capacity of indoor unit will be at air inlet conditions of 27Degree C DB and 19 Degree C WB temperature. 2.4 TR	Nos.	4	31453	1,25,812	
276.00	Supplying, installing, testing and commissioning split type variable speed inverter technology room Air conditioning unit 2 TR capacity having ISEER minimum 4.50 suitable to operate on 250V, 50 cycles, A.C. supply having 1 no. of air handling unit hi-wall/ floor mounting type complete with Refrigerants R410 A /R32 and copper condenser at position. specification no. APAC/ SAC	Nos.	2	62944	1,25,888	
277.00	Supplying, installing, testing and commissioning split type variable speed Inverter technology room Air conditioning unit 1.5 TR capacity having ISEER minimum 4.50 suitable to operate on250V, 50 cycles, A.C. supply having 1 no of air handling unit hiwall / floor mounting type complete with refrigerant R410 A/R32 and copper condensor at position. specification no.APAC/SAC	Nos.	1	51676	51,676	
278.00	Supply, installation, testing and commissioning of copper conductor 2C*1.0 sqmm Control cabling with PVC conduit from indoor to outdoor unit.	Rmt	40	312	12,480	
279.00	Refnets for VRV System (To be supplied by unit manufacturer) Vendor is expected to minimise no. of joints that is required for a complete installation.	Nos.	3	2550	7,650	

Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks
280.00	Supply, installation, testing and commissioning of interconnecting Copper Refrigerant piping between indoor and outdoor unit of VRF system along with Insulation & all accessories like, T, Bend, Elbows. Piping shall be properly Clamped / Installed on Ceiling / Wall by providing GI angle, bracket, threaded support, nut, washer etc., complete piping shall be pressure tested. Insulation of Refrigerant Piping shall be with 19 mm thick nitrile rubber Thermal Insulation. All joints shall be ceiled with good quality adhesive. All piping inside the room will be properly supported with hanger and all external pipe with proper supports and fittings Final sizes ,of Copper Piping sizes shall be as per selected OEM's Requirement . HVAC Contractor shall prepare the shop drawing for Cu Piping Scheme ,which would require final approval from Consultant / Architect ,prior to procurment & execution . SUCTION LINE	Rmt	60	1202	72,120	
281.00	Supply, installation, testing and commissioning of interconnecting Copper Refrigerant piping between indoor and outdoor unit of VRF system along with Insulation & all accessories like, T, Bend, Elbows. Piping shall be properly Clamped / Installed on Ceiling / Wall by providing GI angle, bracket, threaded support, nut, washer etc., complete piping shall be pressure tested. Insulation of Refrigerant Piping shall be with 19 mm thick nitrile rubber Thermal Insulation. All joints shall be ceiled with good quality adhesive. All piping inside the room will be properly supported with hanger and all external pipe with proper supports and fittings Final sizes ,of Copper Piping sizes shall be as per selected OEM's Requirement . HVAC Contractor shall prepare the shop drawing for Cu Piping Scheme ,which would require final approval from Consultant / Architect ,prior to procurment & execution . LIQUID LINE	Rmt	60	847	50,820	
282.00	Supply, installation, testing and commissioning of drain piping using UPVC pipe SCH40 with UPVC fittings and insulated with 6mm thick nitrile rubber o class insulation finished with polished. The pipe goes below ground should be rapped with polythene sheet as follows: 40 mm Dia	Rmt	12.6	447.2	5,635	
283.00	Supply, installation, testing and commissioning of drain piping using UPVC pipe SCH40 with UPVC fittings and insulated with 6mm thick nitrile rubber o class insulation finished with polished. The pipe goes below ground should be rapped with polythene sheet as follows: 32 mm Dia	Rmt	21.8	343.2	7,482	
284.00	Supply, installation, testing and commissioning of drain piping using UPVC pipe SCH40 with UPVC fittings and insulated with 6mm thick nitrile rubber o class insulation finished with polished. The pipe goes below ground should be rapped with polythene sheet as follows: 25 mm	Rmt	21	215	4,515	
285.00	CABLE TRAY/ SUPPORTS/ ENCLOSURE / SLEEVES FOR / REFRIGERANT PIPING / CABLING Supplying and installing following size of perforated Hot Dipped Galvanised Iron cable tray (Galvanisation thickness not less than 50 microns) with perforation not more than 17.5%, in convenient sections, joined with connectors, suspended from the ceiling with G.I. suspenders including G.I. bolts & nuts, etc. as required. 450 mm width X 50 mm depth X 2.0 mm thickness	Rmt	32	1213	38,816	
286.00	CABLE TRAY/ SUPPORTS/ ENCLOSURE / SLEEVES FOR / REFRIGERANT PIPING / CABLING Supplying and installing following size of perforated Hot Dipped Galvanised Iron cable tray (Galvanisation thickness not less than 50 microns) with perforation not more than 17.5%, in convenient sections, joined with connectors, suspended from the ceiling with G.I. suspenders including G.I. bolts & nuts, etc. as required. 300 mm width X 50 mm depth X 1.6 mm thickness	Rmt	8	875	7,000	
287.00	CABLE TRAY/ SUPPORTS/ ENCLOSURE / SLEEVES FOR / REFRIGERANT PIPING / CABLING Supplying and installing following size of perforated Hot Dipped Galvanised Iron cable tray (Galvanisation thickness not less than 50 microns) with perforation not more than 17.5%, in convenient sections, joined with connectors, suspended from the ceiling with G.I. suspenders including G.I. bolts & nuts, etc. as required. 225 mm width X 50 mm depth X 1.6 mm thickness	Rmt	28	811	22,708	

Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks
288.00	MS FRAME STRUCTURE Supply, fabrication and installation of MS base frame for outdoor units complete with 2 coat of epoxy painting, vibration isolation pads, supports, hangers, railing, brackets etc. For construction Construction as approved by Architect/ Consultant. Apply 2 coats of epoxy primer 2 coats of epoxy paint and finish painting as approved by Architect. Stand to be made as per site conditions.	Kg	8	265	2,120	
289.00	Ducting Supply, installation, balancing and commissioning of factory fabricated GSS sheet metal rectangular/round 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. Thickness 0.63 mm sheet (24 gauge)	Sqmtr	50	983	49,150	
290.00	Supplying and erecting aluminium powder coated grill of suitable size for width length without collar dampers having matching colour with the existing false ceiling	Sqmtr	2	1800	3,600	
291.00	Supply, installation, testing and commissioning of flexible duct 50 mm dia	Sqmtr	8	884	7,072	
292.00	Supply and Installation, testing, commissioing of Underdeck Insualtion with 25 mm thk Fire retardent Glass wool rigid boardcovered with R P tissue paper & 30 mm gauge perforated aluminium clading , density 80 kg/cu.m sheet all joints for fixing and GI screws	Sqmtr	255	700	1,78,500	
293.00	VENTILATION SYSTEM FOR TOILET Supply and Installation, testing, commissioing of Propeller type wall mounted fan with louver, cowl and bird screen on outside. 50 cms	Nos.	6	1950	11,700	
294.00	Supply and Installation, testing, commissioing of axial type cabinet fresh air fan with cowl and bird screen on outside 300 cms	Nos.	1	4200	4,200	
		Total			3,73,31,098	

**Assistant Engineer
MSCL Mangaluru**

**Assistant Executive Engineer
MSCL Mangaluru**

**Executive Engineer
MSCL Mangaluru**

**General Manager Technical
MSCL Mangaluru**

OPEX COST FOR 1st YEAR- UPGRADATION OF UPOR

Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks
	LT Panels Fabrication, inspection at works Supply, installation, testing & commissioning of following readymade distribution boards, double door, IP 42 degree protection complete with necessary, MCB isolators , MCBs, earth leakage circuit breaker (ELCB) etc including interconnections with appropriate capacity size of PVC insulated copper conductor wires (ISI marked),suitable for concealed mounting /wall mounting with MS frame work of 40 x 40 x 5 mm MS angle iron, with M.S. enclosure fabricated out of min 16 SWG thick M.S. CRCA sheet with concealed hinged door, locking arrangement etc. including earthing clamps for both incoming & outgoing circuits, interconnections, per phase isolation kit as required,cable end box & wire way box if required, continuous copper earth wire in the wire way box with single/duplicate brass earthing terminals, danger board, name plate, flexible earthing for the door, metal treatment & powder coated painting, Phase Distribution drawing etc. all as per drawings (G.A. & fabrication drawing to be got approved), etc. relevant IS & instruction of Engineer-in-charge. Note:1.MCBs shall be minimum 10 KA breaking capacity (Type –C) 2. Blanking Plates shall be included in scope of work. 3. DB shall be of standard readymade type as per catalouge No. from approved manufacturers as indicated in preferred makes of material. 4. Wire way & cable end box also end & locking plates shall be provided. .					
1.00	5. Routine tests will be conducted at factory in presense of user as per relevant IS All Electrical component should have IS mark Main LT Panel Incomer 1 Nos. 100 Amps TPN MCCB of fault breaking capacity 25KA (Ics=Icu) BUSBARS SECTIONS 100 amps FP, 25kA, 480volts grade busbar chamber of suitable length with Al busbars. All busbars and interconnections shall be of suitable size Al busbar, current density of bus-bars shall not be more than 0.8 Amps/ sq.mm cross sectional area of Bus Bar. OUTGOING 2 Nos. Of 63 A TPN MCB 1 Nos. Of 40 A TPN MCB 1 Nos. Of 25 A TPN MCB 1 Nos. Of 16 A TPN MCB 1 Nos. Of 63 A TPN MCB as SPARE 2 Nos. Of 40 A TPN MCB as SPARE	Set	0.021	35750.0	„,736	
	LT Panels Fabrication, inspection at works Supply, installation, testing & commissioning of following readymade distribution boards, double door, IP 42 degree protection complete with necessary, MCB isolators , MCBs, earth leakage circuit breaker (ELCB) etc including interconnections with appropriate capacity size of PVC insulated copper conductor wires (ISI marked),suitable for concealed mounting /wall mounting with MS frame work of 40 x 40 x 5 mm MS angle iron, with M.S. enclosure fabricated out of min 16 SWG thick M.S. CRCA sheet with concealed hinged door, locking arrangement etc. including earthing clamps for both incoming & outgoing circuits, interconnections, per phase isolation kit as required,cable end box & wire way box if required, continuous copper earth wire in the wire way box with single/duplicate brass earthing terminals, danger board, name plate, flexible earthing for the door, metal treatment & powder coated painting, Phase Distribution drawing etc. all as per drawings (G.A. & fabrication drawing to be got approved), etc. relevant IS & instruction of Engineer-in-charge. Note:1.MCBs shall be minimum 10 KA breaking capacity (Type –C) 2. Blanking Plates shall be included in scope of work. 3. DB shall be of standard readymade type as per catalouge No. from approved manufacturers as indicated in preferred makes of material. 4. Wire way & cable end box also end & locking plates shall be provided					

Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks
2.00	EXTERNAL LIGHTING PANEL Incomer 1 Nos. 32 Amps TPN MCB BUSBARS SECTIONS 50 amps FP, 25kA, 480volts grade busbar chamber of suitable length with Al busbars. All busbars and interconnections shall be of suitable size Al busbar, current density of bus-bars shall not be more than 0.8 Amps/ sq.mm cross sectional area of Bus Bar. OUTGOING 5 Nos. Of 16 A TPN MCB 3 Nos. Of 16 A TPN MCB as SPARE	Set	0.041	52014.0	,,2,143	
3.00	Distribution Board Supplying and fixing regular MCB distribution boards on wall/wood board / flushh mouning using required clamps, bolt, nuts etc. with provision for fixing suitable type capacity MCB's single phase / 3 phase / single goor with powder ciated painting. Made out of 14 SWG MS enclosure. III - Double Door 6Way TP & N	Nos.	0.021	2867.0	,,59	
4.00	Distribution Board Supplying and fixing regular MCB distribution boards on wall/wood board / flushh mouning using required clamps, bolt, nuts etc. with provision for fixing suitable type capacity MCB's single phase / 3 phase / single goor with powder ciated painting. Made out of 14 SWG MS enclosure. III - Double Door 8Way TP & N	Nos.	0.021	3585.0	,,74	
5.00	Distribution Board Supplying and fixing regular MCB distribution boards on wall/wood board / flushh mouning using required clamps, bolt, nuts etc. with provision for fixing suitable type capacity MCB's single phase / 3 phase / single goor with powder ciated painting. Made out of 14 SWG MS enclosure. III - Double Door 12Way TP & N	Nos.	0.041	5138.0	,,212	
6.00	Supplying & fixing miniature circuit breakers on existing MCB distribution boards using necessary fixing materials and "C" Type curve, indicator ON/OFF, energy cross-3 with short circuit breaking capacity of 10K and complete wiring as required confirming to IEC 60898 5-32Amps SP	Nos.	2.348	418.0	,,982	
7.00	Supplying & fixing miniature circuit breakers on existing MCB distribution boards using necessary fixing materials and "C" Type curve, indicator ON/OFF, energy cross-3 with short circuit breaking capacity of 10K and complete wiring as required confirming to IEC 60898 5-32Amps TPN	Nos.	0.021	1547.0	,,32	
8.00	Supplying & fixing miniature circuit breakers on existing MCB distribution boards using necessary fixing materials and "C" Type curve, indicator ON/OFF, energy cross-3 with short circuit breaking capacity of 10K and complete wiring as required confirming to IEC 60898 40-63Amps TPN	Nos.	0.062	1936.0	,,120	
9.00	Supplying fixing and wiring Earth Leakage Miniature Circuit Breaker (ELMCB) 240/450V upto 300mA sensitivity on existing wood/panel board. 16-25 Amps 2Pole	Nos.	0.021	2412.0	,,50	
10.00	Supplying fixing and wiring Earth Leakage Miniature Circuit Breaker (ELMCB) 240/450V upto 300mA sensitivity on existing wood/panel board. 32-40 Amps 2Pole	Nos.	0.062	2623.0	,,162	
11.00	Supplying fixing and wiring Earth Leakage Miniature Circuit Breaker (ELMCB) 240/450V upto 300mA sensitivity on existing wood/panel board. 63A TPN ISOLATOR	Nos.	0.021	5396	,,111	
12.00	Supplying fixing and wiring Earth Leakage Miniature Circuit Breaker (ELMCB) 240/450V upto 300mA sensitivity on existing wood/panel board. 40A TPN ISOLATOR	Nos.	0.021	7010	,,144	

Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks
13.00	LT Cable Supplying and laying the following XLPE insulated 1.1 KV grade, FRLS (outer sheath only), armoured/flexible and overall sheathed copper/aluminium conductor cables made to IS: 7098 (Part-I) 1988. 3.5C x 50sq.mm Al Arm Cable	Mtr	1.648	265.0	„437	
14.00	Supplying, erecting & terminating XLPE armoured cable 4 core 16 sq. mm. copper conductor continuous 5.48 sq. mm. (12 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/ pole or laid in provided trench/ pipe as per specification no. CB-LT/CU	Mtr	1.030	734.0	„756	
15.00	Supplying, erecting & terminating XLPE armoured cable 4 core 6 sq. mm. copper conductor continuous 5.48 sq. mm. (12 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/ pole or laid in provided trench/ pipe as per specification no. CB-LT/CU	Mtr	3.296	336.0	,1,107	
16.00	Supplying, erecting & terminating XLPE armoured cable 4 core 4 sq. mm. copper conductor continuous 5.48 sq. mm. (12 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/ pole or laid in provided trench/ pipe as per specification no. CB-LT/CU	Mtr	21.630	251.0	,5,429	
17.00	LT Cable Termination Supplying and fixing of heavy duty cable glands suitable for UG cable of 1.1KV class (metal only) 32mm dia 2.5mm thick	Each	0.021	122.0	„3	
18.00	Supplying tinned copper lugs and crimping and wiring to terminal point for wire of the following sizes. 16 sqmm	Each	0.021	11.3	„0	
19.00	Supplying tinned copper lugs and crimping and wiring to terminal point for wire of the following sizes. 50 sqmm Long barrel	Each	0.062	62.4	„4	
20.00	Cable Laying Labour charges for laying of 1.1KV class UG cable in existing trench/GI pipe/ stoneware pipe/ on wall/ on pole as required. in existing trench/duct 6 to 16 sqmm	Mtr	20.600	10.8	„222	
21.00	Cable Laying Labour charges for laying of 1.1KV class UG cable in existing trench/GI pipe/ stoneware pipe/ on wall/ on pole as required. in existing trench/duct 25 to 75 sqmm	Mtr	1.236	16.2	„20	
22.00	Cable Laying Labour charges for laying of 1.1KV class UG cable in existing trench/GI pipe/ stoneware pipe/ on wall/ on pole as required. on wall structure 6 to 16 sqmm	Mtr	2.060	31.0	„64	
23.00	Digging of trench of 0.6m deep X 0.5 m wide refilling the trench to the required ground level and consolidating etc., complete (As per Civil SR KSRB i-2, P-7) In soil (ordinary)	Mtr	8.240	78.0	„643	
24.00	Networking & Telecommunication Supply & Drawing UTP-CAT6E LAN Cable	Rmt	10.300	23.00	„237	
25.00	Supply & Fixing of switch mounting rack with power manager & Cable manager 9U with 450mm depth	Nos	0.021	6593.00	„136	
26.00	Supply fixing of Network Switches 48 Port Gigabyte (Manageble)	Nos.	0.021	34815.00	„717	
27.00	Supplying & fixing of I/O socket with box Double I/O	Nos.	0.021	590.00	„12	
28.00	Supplying & fixing ofmtr Cat6 Patch cable 3mtr	Nos.	1.071	337.00	„361	
29.00	Supply & fixing of Patch panel for LAN cabling 48 Port 10/100 patch Panel	Each	0.021	13082.00	„269	
30.00	Supplying and drawing PVC flexible one pair telephone unarmoured tinned copper cables 2 Pair	Mtr	2.472	13.00	„32	
31.00	Crone Box 30 Pair Crone Box	1	0.021	1000.00	„21	
32.00	UPS Supply, installation, testing and commissioning of ON - line UPS system with Batteries for 1/2 hour backup. UPS capacity:- 1 Nos. x 20 kVA.-PRS mode 3Ph-3Ph. with Batteries 6 x 80Ah volt and other accesories to complete the job	Nos	0.021	400000	,8,240	

Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks
33.00	Cable Tray & Raceway Supplying & fixing 2mm thick galvanized perforated tray with powder coated paint on existing MS angle support using necessary GI bolts/nuts and washer or welding as required. 150 X 50 mm	Mtr	0.618	440.0	,,272	
34.00	Cable Tray & Raceway Supplying & fixing 2mm thick galvanized perforated tray with powder coated paint on existing MS angle support using necessary GI bolts/nuts and washer or welding as required. 300 X 50 mm	Mtr	0.206	547.0	,,113	
35.00	Raceways & Accessories Supply and installation of single or multi compartment GI raceway of cross section given below laid in floor complete as specified. a) Raceway b) All bends, joints, supports, end plates couplers earth conductivity. 300 x 50 Double compartment	Rmt	0.412	1215.0	,,501	
36.00	Raceways & Accessories Supply and installation of single or multi compartment GI raceway of cross section given below laid in floor complete as specified. a) Raceway b) All bends, joints, supports, end plates couplers earth conductivity. 150 x 50 Single compartment	Rmt	2.060	590.0	,1,215	
37.00	Providing and fixing of 2 mm thick pregalvanized sheet outlet junction box including providing cover with provision to adjust overall height, knock outs on four sides to accept raceways of specified sizes and cutouts to fix required outlets for following size of race ways. 300 mm wide x 40 mm deep raceway with 3/2/1 compartments	Nos	0.082	2500.0	,,206	
38.00	Providing and fixing of 2 mm thick pregalvanized sheet outlet junction box including providing cover with provision to adjust overall height, knock outs on four sides to accept raceways of specified sizes and cutouts to fix required outlets for following size of race ways. 150 mm wide x 40 mm deep single compartment raceway	Nos	0.165	2000.0	,,330	
39.00	Light Fixture Supply of 2'x2' LED recessed luminaire with... Watts system wattage. Housing shall be with pressure die cast aluminum alloy with corrosion proof resistant polyester power coated. Driver operates with voltage range from 100V to 270V 50/60 Hz with short circuit, overload & mis-wiring protection. Lumen maintenance of 70% at 50000Hrs. Injection moulded polycarbonate diffuser for better mechanical stability, light transmission & avoid pot hole effect. Junction temp. shall be <70 degree Celsius. Driver is on constant current driver @0.06A with PF > 0.92 with line voltage @ 220-240V @ 50/60Hz, driver efficiency > 85% & THD <15%. LED Efficiency > 130lm/W at 1W & fixture efficiency >75lm/W with CRI >75 with injection moulded polycarbonate lens with <80mm depth. 5years Warranty against any manufacturing defect working under standard electrical condition. LED modular down light 2' x 2' -36watts	Each	0.639	8242.0	,5,263	
40.00	Supply of LED square recessed downlighter with 18 W system wattage. Housing shall be with powder coated pressure die cast aluminium alloy with corrosion resistant polyester powder coat & with extended heat sink. Diffuse/cover made of lexan plastic material. rated life shall be L70 @ 50000 Hrs which shall have inbuilt electrical protection like over/under voltage, short circuit, overload, open circuit & miswiring. Driver is in constant current driver output driver at 0.06A with PF > 0.9 with line voltage at 220-240V @ 50/60Hz, driver efficiency > 85% & THD <15%. LED Efficiency > 130 lm/W at 1 W & fixture efficiency > 75 lm/W with CRI > 75 with injection moulded polycarbonate lens. 5years Warranty against any manufacturing defect working under standard electrical condition.	Each	0.659	4945.0	,3,260	
41.00	Supply of recess mounted rolling type LED square or round downlighter 12 Watts with 4/6W GU 10 LED Lamp Rib fabricated from Die cast Iron aluminium with white powder coated prewired to mains connector with suitable driver & having swiveling unit of aluminium die cast eye ball & LED lamp position retained by circular wire spring. 5years Warranty against any manufacturing defect working under standard electrical condition.	Each	0.165	1868.0	,,308	
42.00	11W Bulkhead Supplying and erecting bulkhead fitting suitable for upto LED upto 12W fixed on wall. As per specification no. FG-IDF/BHF	Nos.	0.062	221.0	,,14	
43.00	70 W LED COB Downlighter for Extra high ceiling	Nos	0.082	5985.0	,,493	

Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks
44.00	Supplying of LED floodlight withW system power consumption pressure die cast aluminum housing with powder coating with IP 65 protection 1, 200-275V voltage with electronic driver, PF>0.9, should meet ANSI 2G vibration test, compliance to UL/CE with class I. System rating shall be 50K hrs @ Lumen maintenance of 70% system efficiency>80lm/w. Over load & short circuit protection ensure reliable operation in spite of problem in output side. Compliance to IS 10322/IEC60598, LM 79 & LM 80 Adherence with RoHS, UL approved MCPCB. Top access street light with single screw to ensure ease of maintenance at the sight site location with minimized minimal tools. Light fixture with ... W system power consumption. LED efficiency > 130lm/W at 1W & fixture efficiency > 80lm/w with nominal CRI > 75. Luminaire manufacture should have in-house facility accredited by NABL/CPRI & any government certified agency & design & development facility certified by ISO 9001:2008. Housing with supplier word mark / name shall be Engraved / Embossing on the die cast housing / body part. Warranty of 5 years against any manufacturing defect working under standard electrical conditions as mentioned above should be given by LED manufacturer. LED Floodlight 60W	Nos	0.041	7129.0	„294	
45.00	Supply, installation, testing & commissioning of LED weatherproof street light fixture suitable for mounting on suitable dia pipe at any angle between lateral (side entry) and vertical (top mounted), prewired with led driver for 240V, 50Hz single phase AC supply, compliant to IP 65 protection grade, and all other necessary components and accessories to finish the job. 40W LED light fixture	Nos.	0.824	2931	„2,415	
46.00	Fabricating, supply, erection of ___mtr long hot dip galvanized Octagonal pole with BSEN 10025 grade S 355 jo steel plate shaft IS 2062 for base plate with door opening arrangement, including suitable boards, Bakelite sheet and MCB as per IS specification and suitable to withstand wind speed of 47 m/sec for ___mtr pole in single section and single joint welded as per IS 9595/IS 10178 AWS having dimension bottom ___mm and top ___mm with 3 mm thick, suitable base plate and 4 nos of long J bolt along with templet and the pole shall be hot dip galvanized in single dipping with not less than 65 micron as per ASTM - A123 and 153 etc. excluding foundation as per drawing 7 meter- top 70 mm and bottom 130 mm dia (SOR Item No - 5.14, 5.14.1) 7 meter - Top 70mm and bottom 130mm dia	Nos.	0.824	12420	„10,234	
47.00	Supplying and fixing of hot deep Galvanized M.S.Bracket suitable for outdoor luminaries and mounted on Octagonal pole using necessary bolt, nuts etc., complete. Single arm Bracket with 1000mm standard 40/50mm dia	Nos.	0.824	1919	„1,581	
48.00	Bollard Lights Supply, installation, testing & commissioning of LED Bollard lights prewired with led driver operated on 240V, 50Hz single phase AC supply, compliant to IP 66 protection grade and with all other necessary components and accessories to finish the job. (For Garden Lighting) 10 - 12W LED light fixture	Nos.	0.700	2205	„1,544	
49.00	Point Wiring, Switch Sockets & Accessories OPEN CONDUIT SYSTEM Supply heavy gauge PVC conduit pipe ... dia ... mm thick confirming to IS 2509 with suitable size bends, junction boxes, adhesive paste etc., and fixing using inverted wood plugs in case of RCC ceiling and RCC wall / stone structure or rawl plugs in case of brick walls and cement plastering the damaged portion using heavy gauge saddles at an interval of 700mm using NF screws 25mm dia 2mm thick	Mtr	4.120	70.0	„288	
50.00	Point Wiring, Switch Sockets & Accessories OPEN CONDUIT SYSTEM Supply heavy gauge PVC conduit pipe ... dia ... mm thick confirming to IS 2509 with suitable size bends, junction boxes, adhesive paste etc., and fixing using inverted wood plugs in case of RCC ceiling and RCC wall / stone structure or rawl plugs in case of brick walls and cement plastering the damaged portion using heavy gauge saddles at an interval of 700mm using NF screws 32mm dia 2.5mm thick	Mtr	2.060	100.0	„206	

Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks
51.00	Supply heavy gauge PVC conduit pipe ... dia ... mm thick confirming to IS 2509 with suitable size bends, junction boxes, adhesive paste etc., and running before concreting the slab. The conduit should be tied to the reinforcement rods by using binding wires and unused ways of junction boxes and pipe ends should be covered using PVC and enclosures, run with 18SWG GI fish wire wherever necessary 25mm dia 2mm thick	Mtr	2.060	57.0	,,117	
52.00	Supply heavy gauge PVC conduit pipe ... dia ... mm thick confirming to IS 2509 with suitable size bends, junction boxes, adhesive paste etc., and running before concreting the slab. The conduit should be tied to the reinforcement rods by using binding wires and unused ways of junction boxes and pipe ends should be covered using PVC and enclosures, run with 18SWG GI fish wire wherever necessary 32mm dia 2.5mm thick	Mtr	2.060	90.0	,,185	
53.00	POINT WIRING USING COPPER WIRE Wiring for light/power circuit using one of FRLS PVC insulated 1100V grade, multistandard copper with low conductor resistance single core in open or concealed system of wiring with specified IS-694:1990 & confirming to GTP of GROUP-A. 1.5 sqmm	Mtr	45.320	18.6	,,843	
54.00	POINT WIRING USING COPPER WIRE Wiring for light/power circuit using one of FRLS PVC insulated 1100V grade, multistandard copper with low conductor resistance single core in open or concealed system of wiring with specified IS-694:1990 & confirming to GTP of GROUP-A. 2.5 sqmm	Mtr	28.840	29.2	,,842	
55.00	POINT WIRING USING COPPER WIRE Wiring for light/power circuit using one of FRLS PVC insulated 1100V grade, multistandard copper with low conductor resistance single core in open or concealed system of wiring with specified IS-694:1990 & confirming to GTP of GROUP-A. 4 sqmm	Mtr	22.660	42.1	,,954	
56.00	SWITCH, SOCKETS & ACCESSORIES Switch, socket, data & telephone points Supply and flush mounting powder coated/ galvanised metal box suitable for mounting modular switch plate. The box should be firmly flush mounted after due groove cutting in Brick/Stone/C.C wall 1-3 Way	Each	0.639	91.0	,,58	
57.00	SWITCH, SOCKETS & ACCESSORIES Switch, socket, data & telephone points Supply and flush mounting powder coated/ galvanised metal box suitable for mounting modular switch plate. The box should be firmly flush mounted after due groove cutting in Brick/Stone/C.C wall 6 Way	Each	2.225	121.0	,,269	
58.00	Supply and fixing superior quality modular switch mounting polycarbonate plate with necessary supporting back plate with required nos. of machine screws, bolts nuts etc., complete on the the existing metal/PVC box 1 to 3 Module	Each	0.639	109.0	,,70	
59.00	Supply and fixing superior quality modular switch mounting polycarbonate plate with necessary supporting back plate with required nos. of machine screws, bolts nuts etc., complete on the the existing metal/PVC box 6 Module	Each	2.225	173.0	,,385	
60.00	Supply and fixing of modular switch/ socket/ stepped electronic fan regulator/ dimmer/ telephone socket etc on existing modular switch plate as per IS 3854 & IS 1293 6 amp one Way	Each	0.103	63.0	,,6	
61.00	Supply and fixing of modular switch/ socket/ stepped electronic fan regulator/ dimmer/ telephone socket etc on existing modular switch plate as per IS 3854 & IS 1293 6 amp 3Way Socket	Each	0.103	95.0	,,10	
62.00	Supply and fixing of modular switch/ socket/ stepped electronic fan regulator/ dimmer/ telephone socket etc on existing modular switch plate as per IS 3854 & IS 1293 16 Amp one way switch	Each	2.245	114.0	,,256	
63.00	Supply and fixing of modular switch/ socket/ stepped electronic fan regulator/ dimmer/ telephone socket etc on existing modular switch plate as per IS 3854 & IS 1293 6/16 Amps Universal Socket	Each	2.245	147.0	,,330	

Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks
64.00	Supply and fixing of modular switch/ socket/ stepped electronic fan regulator/ dimmer/ telephone socket etc on existing modular switch plate as per IS 3854 & IS 1293 TV / Telephone Socket	Each	0.536	82.0	„44	
65.00	Supply and fixing of modular switch/ socket/ stepped electronic fan regulator/ dimmer/ telephone socket etc on existing modular switch plate as per IS 3854 & IS 1293 RJ45/IO Outlet	Each	0.536	204.0	„109	
66.00	GI EARTHING Earthing with G.I. earth pipe 4.5 metre long, 40 mm dia including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe etc. with charcoal/ coke and salt as required.	Each	0.288	5308.0	„1,531	
67.00	Earthing with copper earth plate 600 mm X 600 mm X 3 mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 metre long etc. with charcoal/ coke and salt as required.	Each	0.041	11794.0	„486	
68.00	Supplying and laying 25 mm X 5 mm G.I strip at 0.50 metre below ground as strip earth electrode, including connection/ terminating with G.I. nut, bolt, spring, washer etc. as required. (Jointing shall be done by overlapping and with 2 sets of G.I. nut bolt & spring washer spaced at 50mm)	Metre	10.300	131.0	„1,349	
69.00	Supplying and laying 25 mm X 5 mm copper strip at 0.50 metre below ground as strip earth electrode, including connection/ terminating with nut, bolt, spring, washer etc. as required. (Jointing shall be done by overlapping and with 2 sets of brass nut bolt & spring washer spaced at 50mm)	Metre	0.824	853.0	„703	
70.00	GI wire Supplying and running GI/Copper conductor for grounding and (along with other wires in conduit sysytem of wiring) using necessary suitable size clamps, nails, guttas/spacers, etc. 8 SWG	Mtr	3.090	19.5	„60	
71.00	Supply, Installation, testing and commissioning of 6W Ceiling Speaker with max 1M/1W 96DB . Frequency response of 80Hz-20KHz with a dispersion angle of 160 deg.	No	0.268	1780	„477	
72.00	Supply, Installation, testing and commissioning of 15W Wall mount Horn Speaker	No	0.041	10132	„417	
73.00	Supply, Installation, testing and commissioning 2Core, 1.5 sq. mm Screened Multi-Stranded, Bare Copper Conductor, PVC Insulated cable as per IS 694-1990	Mtr	7.210	51	„368	
74.00	Supplying heavy gauge PVC conduit pipe below mention mm dia and thick conforming to IS 2509 with suitable size bends, metal/PVC junction boxes, adhesive paste etc. and running before concreting the slab. The conduit should be tied to the reinforcement rods by using binding wires and unused ways of junction boxes and pipe ends should be covered using PVC end enclousers, run with 18 swg fish wire wherever necessasary 25 mm dia 2 mm thick	Mtr.	4.120	70	„288	
75.00	Supplying, installation, testing & commissioning of intelligent addressable duct detector including suitable Photo detector complete with base as required.	Nos.	0.515	7801	„4,018	
76.00	Supplying, installation, testing & commissioning of response indicator on surface/recessed MS Box having two LED, metallic cover complete with all connections etc as required.	Nos.	0.144	263	„38	
77.00	Supplying, installation, testing & commissioning of intelligent addressable thermal detector with rate of rise cum fixed tempreature thermistor complete with base as required.	Nos.	0.021	2713	„56	
78.00	Supplying, installation, testing & commissioning of addressable manual call point complete as required.	Nos.	0.062	3859	„238	
79.00	Supplying, installation, testing & commissssioning of intelligent addressable programmable sounder complete as required.	Nos.	0.062	2638	„163	
80.00	Supplying, installation, testing & commissioning of addressable strobe complete as required.	Nos.	0.062	3354	„207	
81.00	Supplying and erecting UPVC conduit 25 mm in dia. conforming to I.S. with required number of couplings, PVC bushes, check nuts etc. complete.	RM	6.180	58	„358	
82.00	Supplying & laying of 2x1.5 sqmm fire alarm armoured cable, 600/1000V rated with annealed copper conductor having XLPE insulation, steel wire armouring & FRLS outer sheath complete as required.	RM	7.210	141	„1,017	

Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks
83.00	Supplying and erecting ABC Dry Chemical Powder type Fire extinguisher 4 kg capacity cartridge tyB with gun metal cap 150 gram CO2 gas cartridge powder and brackets conforming to IS 2171-1985 and complete erected with necessary clamps made from 50x6mm MS flat with nuts and bolts grouted in wall complete	Nos.	3.759	4788	,18,000	
84.00	SANITARYWARE & FITTINGS Providing and fixing white vitreous china clay, water closet European type (Pedestal type, P-trap) with black solid plastic seat and lid, C. P brass hinges, rubber buffers. 10 litre low level, PVC flushing cistern (all are approved make) with fittings, C. I I M.S brackets, 40mm diameter flush bend with fittings and clamps, overflow arrangements with special and 25mm mosquito proof coupling of approved design, painting of fittings and brackets, cutting and making good the wall and floor wherever required, including cost of materials, labour complete as per specifications.	Nos.	0.529	4956	,2,624	
85.00	Providing and fixing C.P. brass bib cock of approved quality conforming to IS:8931 15 mm nominal bore	Nos.	0.529	418.95	,,222	
86.00	Providing and fixing Hand shower (health faucet) with 8mm dia. 1m long flexible tube having wall hook with approved make including necessary sockets/ union nut etc. complete as directed by Engineer in charge.	Nos.	0.529	1677	,,888	
87.00	Providing and fixing white vitreous china clay, flat back wash basin size 550x400mm with a pair of 15mm C.P brass pillar taps with C.I I M .S brackets, 32 mm C. P. brass waste of standard pattern, painting of fittings and brackets, cutting and making good the wall and floor wherever required, including cost of materials, labour complete as per specifications size 550 x 400mm	Nos.	0.529	3879	,2,053	
88.00	Providing vitreous china clay toilet paper holder with a pack of papers as per specification	Nos.	0.529	414	,,219	
89.00	Supplying and fixing of UPVC WC connector (straight or bend type) with rubber lip ring. Including 110 mm dia UPVC pipe of required length and proper connection complete as required.	Nos.	0.529	864	,,457	
90.00	Providing gun metal pillar cocks 15mm dia of I class conforming to ISI specifications and fixing them in position as per directions including of cost of materials and fixtures and conveyance to spot	Nos.	0.265	242	,,64	
91.00	Providing and fixing PTMT Waste Coupling for sink, of approved quality and colour. Waste coupling 31 mm dia of 79 mm length and 62mm breadth weighing not less than 45 gms	Nos.	0.529	99.75	,,53	
92.00	Providing and fixing CP Brass 32mm size Bottle Trap of approved quality & make and as per the direction of Engineer-in-charge.	Nos.	0.529	883.05	,,467	
93.00	Providing and fixing 600x450mm bevel Lead edge mirror of superior glass with 6mm hard board backing and fixed to wooden cleats with C.P screws, washers, including cost of materials, labour complete as per specifications.	Nos.	0.529	1157	,,612	
94.00	Providing and fixing liquid soap glass dispenser and holder as per design.	Pair	0.529	145	,,77	
95.00	INTERNAL WATER SUPPLY SYSTEM Providing and fixing Chlorinated Poly-Venyl Chloride (CPVC) pipes conforming to IS 15778, having thermal stability for hot and cold water supply including all CPVC plain and brass threaded fittings including fixing the pipe with clamp at 1.00 mtr spacing. This includes jointing of pipes and fittings with one step CPVC solvent cement & the cost of cutting chases & making good the same including testing of joints complete as per specifications.. (Concealed work including cutting chases and good the walls etc.) 15mm nominal OD pipes	Rmt	4.103	206	,,845	
96.00	INTERNAL WATER SUPPLY SYSTEM Providing and fixing Chlorinated Poly-Venyl Chloride (CPVC) pipes conforming to IS 15778, having thermal stability for hot and cold water supply including all CPVC plain and brass threaded fittings including fixing the pipe with clamp at 1.00 mtr spacing. This includes jointing of pipes and fittings with one step CPVC solvent cement & the cost of cutting chases & making good the same including testing of joints complete as per specifications.. (Concealed work including cutting chases and good the walls etc.) 20mm nominal OD pipes	Rmt	0.331	235	,,78	

Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks
97.00	INTERNAL WATER SUPPLY SYSTEM Providing and fixing Chlorinated Poly-Vinyl Chloride (CPVC) pipes conforming to IS 15778, having thermal stability for hot and cold water supply including all CPVC plain and brass threaded fittings including fixing the pipe with clamp at 1.00 mtr spacing. This includes jointing of pipes and fittings with one step CPVC solvent cement & the cost of cutting chases & making good the same including testing of joints complete as per specifications.. (Concealed work including cutting chases and good the walls etc.) 25mm nominal OD pipes	Rmt	3.706	293	,,1,086	
98.00	INTERNAL WATER SUPPLY SYSTEM Providing and fixing Chlorinated Poly-Vinyl Chloride (CPVC) pipes conforming to IS 15778, having thermal stability for hot and cold water supply including all CPVC plain and brass threaded fittings including fixing the pipe with clamp at 1.00 mtr spacing. This includes jointing of pipes and fittings with one step CPVC solvent cement & the cost of cutting chases & making good the same including testing of joints complete as per specifications.. (Concealed work including cutting chases and good the walls etc.) 32mm nominal OD pipes	Rmt	1.985	374	,,742	
99.00	Providing and fixing gun metal wheel valve conforming to IS specification of approved make as per directions including all lead and lift etc., complete. 15mm dia	Nos.	0.132	395	,,52	
100.00	Providing and fixing gun metal wheel valve conforming to IS specification of approved make as per directions including all lead and lift etc., complete. 20mm dia	Nos.	0.132	414	,,55	
101.00	Providing and fixing gun metal wheel valve conforming to IS specification of approved make as per directions including all lead and lift etc., complete. 25mm dia	Nos.	0.794	447	,,355	
102.00	Providing and fixing gun metal wheel valve conforming to IS specification of approved make as per directions including all lead and lift etc., complete. 32mm dia	Nos.	0.794	486	,,386	
103.00	Providing and fixing gun metal wheel valve conforming to IS specification of approved make as per directions including all lead and lift etc., complete. 40mm dia	Nos.	0.529	562	,,298	
104.00	Providing and fixing gun metal wheel valve conforming to IS specification of approved make as per directions including all lead and lift etc., complete. 50mm dia	Nos.	0.265	734	,,194	
105.00	Supplying, fixing, testing and commissioning of butterfly valve of PN 1.6 rating with bronze/gunmetal seat duly ISI marked complete with nuts, bolts, washers, gaskets conforming to IS 13095 of following sizes as required : 50 mm	Set	0.397	3671	,,1,457	
106.00	Supplying, fixing, testing and commissioning of butterfly valve of PN 1.6 rating with bronze/gunmetal seat duly ISI marked complete with nuts, bolts, washers, gaskets conforming to IS 13095 of following sizes as required : 65 mm	Set	0.066	4149	,,275	
107.00	Providing, installation, testing and commissioning of non-return valve of following sizes conforming to IS: 5312 complete with rubber gasket, GI bolts, nuts, washers etc.as required : 50 mm	Set	0.265	2800	,,741	
108.00	Providing, installation, testing and commissioning of Gun metal Y-strainer fabricated out of 1.6 mm thick stainless steel, Grade 304, sheet with 3 mm dia holes with stainless steel flange. 50 mm	Each	0.132	3200	,,423	
109.00	Supplying and installing pressure gauge of 100 mm dia., 0-300 PSI or 0-14 kg per cm square fitted with 12/15 mm dia. pad cock valve, and G.I. pipe, elbow etc. complete as per specification no. FF-FFA/PG	Each	0.132	657	,,87	
110.00	Providing and fixing in position brass ball valve high or low pressure with plastic float of approved quality nominal bore including cost of all materials, labour and HOM with all leads complete as per specifications. 25 mm dia nominal	Nos.	0.331	513	,,170	

Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks
111.00	Supplying Installing, testing and commissioning of Gun metal AIR RELEASE VALVE SIZE OF 25mm dia including cost of materials, labour, HOM complete as per specifications.	Nos.	0.265	1875	„496	
112.00	Providing & fixing PVC Vent Cowl 110 mm	Nos.	0.132	450	„60	
113.00	Providing & fixing PVC Vent Cowl 65 mm	Nos.	0.132	320	„42	
114.00	EXTERNAL WATER SUPPLY SYSTEM Providing and fixing in trenches galvanised IS 1239 C class pipe nominal bore with all fittings (earth work in trenches to be measured and paid for separately) including cost of all materials, labour charges, HOM of equipments and testing complete as per specifications. 50 mm dia	Rmt	1.456	388	„565	
115.00	Providing and fixing water meter with stop cock, jam nut, socket in G. I pipe line including cutting and threading the pipe and making long screws including cost of all materials, labour, HOM and testing complete as per specifications.	Set	0.066	1320	„87	
116.00	INTERNAL DRAINAGE SYSTEM Providing and fixing SWR pipes 6 kg/sq.cm B class working pressure with pipe fittings, support, including cost of all materials, labour charges, HOM of equipment and testing complete as per specifications. IS 13592 do- with 110mm outer dia	Rmt	4.301	750	„3,226	
117.00	INTERNAL DRAINAGE SYSTEM Providing and fixing SWR pipes 6 kg/sq.cm B class working pressure with pipe fittings, support, including cost of all materials, labour charges, HOM of equipment and testing complete as per specifications. IS 13592 do- with 160mm outer dia	Rmt	3.309	1150	„3,805	
118.00	Providing and fixing SS Nahani trap of approved make conforming to ISI specifications and construction of Cistern in M15 as directions (Rate is inclusive of cost of materials and fixtures and conveyance of materials to work spot). 12.5 cms x 7.5 cms	Each	0.265	1120	„296	
119.00	Supplying & Fixing in position 100 mm dia UPVC Multi traps of self cleaning design including 125 mm dia brass C.P. grating, jointing, embedding in concrete etc. complete. Rate to include making of opening in floor, marble / tiles, for fixing C.P gratings, extension connector as required, complete.	Nos.	0.596	1520	„905	
120.00	Providing and fixing PVC Gully Trap as per specification 300 X 300	Nos.	0.199	1150	„228	
121.00	EXTERNAL DRAINAGE SYSTEM Inspection Chamber Constructing brick masonry inspection chamber internal dimensions 450x450mm, (clear inside dimension) for pipeline with three or more inlets, using table moulded non-modular bricks of class designation 50 in cement mortar 1•5, C. I cover with frame (Heavy duty) total weight of cover with frame to be not less than 125 kg (weight of cover 23kg and weight of frame 15 kg) R.C.C. top slab with cement concrete M 15 with 20mm and downsize granite metal , foundation concrete M 5 with 40mm and downsize granite metal inside plastering 12mm thick with cement mortar 1:3, finished smooth with a floating coat of cement on walls and bed concrete complete as per standard design including cost of materials, labour charges, curing complete as per specifications. (Depth up to 600- 1500 mm)	Nos.	0.066	8900	„589	
122.00	Constructing brick masonry inspection chamber internal dimensions 450x900mm, (clear inside dimension) for pipeline with three or more inlets, using table moulded non-modular bricks of class designation 50 in cement mortar 1•5, C. I cover with frame (Heavy duty) total weight of cover with frame to be not less than 125 kg (weight of cover 23kg and weight of frame 15 kg) R.C.C. top slab with cement concrete M 15 with 20mm and downsize granite metal , foundation concrete M 5 with 40mm and downsize granite metal inside plastering 12mm thick with cement mortar 1:3, finished smooth with a floating coat of cement on walls and bed concrete complete as per standard design including cost of materials, labour charges, curing complete as per specifications. (Depth up to 600- 1500 mm)	Nos.	0.397	12500	„4,963	

Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks
123.00	Water Tank Providing and fixing H.D.P container Syntex or alike one piece moulded water tank made out of high density polythylene and built corrugated inclusive of delivery up to destination hoisting and fixing of accessories such as inlet,outlet overflow pipe inclusive of all tanks capacity Capacity- 5000 ltr	Unit	0.066	60000	,3,970	
124.00	Pumps Supply, installation, testing & commissioning of Submersible pumps (1 working + 1 standby) with 10 mm thick solid handling capacity. C.I body with built in strainer & SS 304 impeller, coupled to motor suitable for operation on 430 V 3 pH 50 Cycle A/C power supply and lifting arrangement including complete as required. Automatic Electric control panel with change over switch, relays, electrical wiring, cabling from panel to pumps, level controller complete with all accessories as per manufacturer specifications Accessories like NRV's valves on discharge and valve and strainer in suction line, header for suction and delivery side, required cut pieces of pipes, fittings, flanges, pressure gauge, base frame and concrete foundation complete as required. Flow rate : 3 LPS (1 Working +1 Standby) Head : 35 Mts Purpose : Water Transfer from UGT to OHT Location : Underground Tank	Nos.	0.132	105000	,13,896	
125.00	Variable Refrigerant Flow system VRF UNIT Supply, Installation, Testing & Commissioning of modular type Variable Refrigerant Volume Air Cooled Outdoor Units suitable for cooling and heating, having all hermetically sealed inverter type scroll compressor, minimum two compressors for above 14HP modules , microprocessor based controller , top discharge type condensing units , with R 410A refrigerant , vibration isolators with suitable foundation etc. complete as required. The unit shall deliver the rated capacity at AHRI Conditions & work even at 50 ° C ambient temperature without tripping. The unit shall be suitable to work on 400V +/- 10%, 3 Phase, 50Hz AC power supply. The unit shall be filled with first charge of refrigerant and ready for use as required. The COP at AHRI conditions shall not be less than 3.1 and EER not less than 6.5. 10 HP outdoor unit	Nos.	0.079	164150	,12,917	
126.00	Supply,installation,testing andcommissioning of following minimum capacity 4 way flow VRV/VRF Cassette Type Indoor ceiling mounted unit equipped with synthetic washable media pre-filter, fan section with low noise fan/dynamically balanced blower,multi speed motor, coil section with DX Copper coil, electronic expansion valve,outer cabinet, drain pump,grill, necessary supports, vibration isolation, cordless remote controletc.,suitable for operation on single phase 230V±10%, 50HzAC supply, complete, as required.The units shall have automatic force shutdown provision in case of fire on receiving signal from BMS System. The cooling capacity of indoor unit will be at air inlet conditions of 27Degree C DB and 19 Degree C WB temperature. 2.4 TR	Nos.	0.315	31453	,9,900	
127.00	Supplying, installing, testing and commissioning split type variable speed inverter technology room Air conditioning unit 2 TR capacity having ISEER minimum 4.50 suitable to operate on 250V, 50 cycles, A.C. supply having 1 no. of air handling unit hi-wall/ floor mounting type complete with Refrigerants R410 A /R32 and copper condenser at position. specification no. APAC/ SAC	Nos.	0.157	62944	,9,906	
128.00	Supplying, installing, testing and commissioning split type variable speed Inverter technology room Air conditioning unit 1.5 TR capacity having ISEER minimum 4.50 suitable to operate on250V, 50 cycles, A.C. supply having 1 no of air handling unit hiwall / floor mounting type complete with refrigerant R410 A/R32 and copper condensor at position. specification no.APAC/SAC	Nos.	0.079	51676	,4,066	
129.00	Supply, installation, testing and commissioning of copper conductor 2C*1.0 sqmm Control cabling with PVC conduit from indoor to outdoor unit.	Rmt	3.148	312	,,982	

Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks
130.00	Refnets for VRV System (To be supplied by unit manufacturer) Vendor is expected to minimise no. of joints that is required for a complete installation.	Nos.	0.236	2550	„602	
131.00	Supply, installation, testing and commissioning of interconnecting Copper Refrigerant piping between indoor and outdoor unit of VRF system along with Insulation & all accessories like, T, Bend, Elbows. Piping shall be properly Clamped / Installed on Ceiling / Wall by providing GI angle, bracket, threaded support, nut, washer etc., complete piping shall be pressure tested. Insulation of Refrigerant Piping shall be with 19 mm thick nitrile rubber Thermal Insulation. All joints shall be ceiled with good quality adhesive. All piping inside the room will be properly supported with hanger and all external pipe with proper supports and fittings Final sizes ,of Copper Piping sizes shall be as per selected OEM's Requirement . HVAC Contractor shall prepare the shop drawing for Cu Piping Scheme ,which would require final approval from Consultant / Architect ,prior to procurment & execution . SUCTION LINE	Rmt	4.722	1202	„5,675	
132.00	Supply, installation, testing and commissioning of interconnecting Copper Refrigerant piping between indoor and outdoor unit of VRF system along with Insulation & all accessories like, T, Bend, Elbows. Piping shall be properly Clamped / Installed on Ceiling / Wall by providing GI angle, bracket, threaded support, nut, washer etc., complete piping shall be pressure tested. Insulation of Refrigerant Piping shall be with 19 mm thick nitrile rubber Thermal Insulation. All joints shall be ceiled with good quality adhesive. All piping inside the room will be properly supported with hanger and all external pipe with proper supports and fittings Final sizes ,of Copper Piping sizes shall be as per selected OEM's Requirement . HVAC Contractor shall prepare the shop drawing for Cu Piping Scheme ,which would require final approval from Consultant / Architect ,prior to procurment & execution . LIQUID LINE	Rmt	4.722	847	„3,999	
133.00	Supply, installation, testing and commissioning of drain piping using UPVC pipe SCH40 with UPVC fittings and insulated with 6mm thick nitrile rubber o class insulation finished with polished. The pipe goes below ground should be rapped with polythene sheet as follows: 40 mm Dia	Rmt	0.992	447.2	„443	
134.00	Supply, installation, testing and commissioning of drain piping using UPVC pipe SCH40 with UPVC fittings and insulated with 6mm thick nitrile rubber o class insulation finished with polished. The pipe goes below ground should be rapped with polythene sheet as follows: 32 mm Dia	Rmt	1.715	343.2	„589	
135.00	Supply, installation, testing and commissioning of drain piping using UPVC pipe SCH40 with UPVC fittings and insulated with 6mm thick nitrile rubber o class insulation finished with polished. The pipe goes below ground should be rapped with polythene sheet as follows: 25 mm	Rmt	1.653	215	„355	
136.00	CABLE TRAY/ SUPPORTS/ ENCLOSURE / SLEEVES FOR / REFRIGERANT PIPING / CABLING Supplying and installing following size of perforated Hot Dipped Galvanised Iron cable tray (Galvanisation thickness not less than 50 microns) with perforation not more than 17.5%, in convenient sections, joined with connectors, suspended from the ceiling with G.I. suspenders including G.I. bolts & nuts, etc. as required. 450 mm width X 50 mm depth X 2.0 mm thickness	Rmt	2.518	1213	„3,055	
137.00	CABLE TRAY/ SUPPORTS/ ENCLOSURE / SLEEVES FOR / REFRIGERANT PIPING / CABLING Supplying and installing following size of perforated Hot Dipped Galvanised Iron cable tray (Galvanisation thickness not less than 50 microns) with perforation not more than 17.5%, in convenient sections, joined with connectors, suspended from the ceiling with G.I. suspenders including G.I. bolts & nuts, etc. as required. 300 mm width X 50 mm depth X 1.6 mm thickness	Rmt	0.630	875	„551	

Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks
138.00	CABLE TRAY/ SUPPORTS/ ENCLOSURE / SLEEVES FOR / REFRIGERANT PIPING / CABLING Supplying and installing following size of perforated Hot Dipped Galvanised Iron cable tray (Galvanisation thickness not less than 50 microns) with perforation not more than 17.5%, in convenient sections, joined with connectors, suspended from the ceiling with G.I. suspenders including G.I. bolts & nuts, etc. as required. 225 mm width X 50 mm depth X 1.6 mm thickness	Rmt	2.203	811	,1,787	
139.00	MS FRAME STRUCTURE Supply, fabrication and installation of MS base frame for outdoor units complete with 2 coat of epoxy painting, vibration isolation pads, supports, hangers, railing, brackets etc. For construction Construction as approved by Architect/ Consultant. Apply 2 coats of epoxy primer 2 coats of epoxy paint and finish painting as approved by Architect. Stand to be made as per site conditions.	Kg	0.630	265	,,167	
140.00	Ducting Supply, installation, balancing and commissioning of factory fabricated GSS sheet metal rectangular/round 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. Thickness 0.63 mm sheet (24 gauge)	Sqmtr.	3.935	983	,3,868	
141.00	Supplying and erecting aluminium powder coated grill of suitable size for width length without collar dampers having matching colour with the existing false ceiling	Sqmtr.	0.157	1800	,,283	
142.00	Supply, installation, testing and commissioning of flexible duct 50 mm dia	Sqmtr.	0.630	884	,,557	
143.00	Supply and Installation, testing, commissioing of Underdeck Insualtion with 25 mm thk Fire retardent Glass wool rigid boardcovered with R P tissue paper & 30 mm gauge perforated aluminium clading , density 80 kg/cu.m sheet all joints for fixing and GI screws	Sqmtr.	20.066	700	,14,047	
144.00	VENTILATION SYSTEM FOR TOILET Supply and Installation, testing, commissioing of Propeller type wall mounted fan with louver, cowl and bird screen on outside. 50 cms	Nos.	0.472	1950	,,921	
145.00	Supply and Installation, testing, commissioing of axial type cabinet fresh air fan with cowl and bird screen on outside 300 cms	Nos.	0.079	4200	,,331	
		Total			,2,09,433	

Assistant Engineer
MSCL Mangaluru

Assistant Executive Engineer
MSCL Mangaluru

Executive Engineer
MSCL Mangaluru

General Manager Technical
MSCL Mangaluru

BOQ of UPOR - Civil Work

Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks
1.00	KSRRB M200-11.1. Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned, including removal and disposal of top organic soil not exceeding 150 mm in thickness complete as per specifications and as directed by engineer in charge. II. By Mechanical Means: A. In area of light jungle. MORTH Specification No. 201 (KPWD 18-19,Sl.No.18.15)	Ha	1.22	20378.60	24,862	
2.00	KSRRB M200-12.1. Dismantling of existing structures like culverts, bridges, retaining walls and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts complete as per specifications and as directed by engineer in charge. i) Lime /Cement Concrete. I. By Manual Means: A. Lime Concrete, cement concrete grade M-10 and below. MORTH Specification No. 202 (KPWD 18-19,Sl.No.18.17)	Cum	10.00	499.40	4,994	
3.00	KSRRB M200-15.1. Dismantling of existing structures like culverts, bridges, retaining walls and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts complete as per specifications and as directed by engineer in charge. iii) Dismantling Stone Masonry. MORTH Specification No. 202 KSRRB M200- 15.2. do- B. Rubble stone masonry in cement mortar. (KPWD 18-19,Sl.No.18.27)	Cum	50	386.1	19,305	
4.00	KSRRB M200-32. Removal of Telephone /Electric poles including excavation and dismantling of foundation concrete and lines under the supervision of concerned department, disposal with all lifts and stacking the serviceable and unserviceable material separately complete as per specifications. MORTH Specification No. 202 (KPWD 18-19,Sl.No.18.57)	Nos	5.00	238.70	1,194	
5.00	KSRRB M200-14.1. Dismantling of existing structures like culverts, bridges, retaining walls and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts complete as per specifications and as directed by engineer in charge. KSRRB M200-14.2. do- Dismantling brick/Tile work B. In cement mortar. (KPWD 18-19,Sl.No.18.23)	Cum	5.00	386.10	1,931	

Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks
6.00	KSRRB M200-15.1. Dismantling of existing structures like culverts, bridges, retaining walls and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts complete as per specifications. iKSRRB M200-17.1. do- v) Steel work in all types of Sections upto a Height of 5 m above plinth level excluding Cutting of Rivet. - A. Including dismembering." (KPWD 18-19,Pg.No.140,Sl.No.18.33)	MT	13.00	2082.30	27,070	
7.00	Dismantling doors, windows and clerestory windows (steel or wood) shutter including chowkhats, architrave, holdfasts etc. complete and stacking as directed by Engineer in charge with all leads and lifts. Of area 3 sq. metres and below (CPWD 2018 15.12.1)	Nos.	4.00	274.50	1,098	
8.00	Dismantling cement concrete flooring or plain cement concrete work including removing and conveying the debris to distance 10km (within average thickness of 15 cms). including cost of materials, labour, HOM complete as per specifications. (KPWD 18-19,Sl.No.37.51)	Sqm	50.00	94.60	4,730	
9.00	Dismantling roofing including ridges, hips, valleys and gutters etc., and stacking the material as directed by engineer in charge with all leads and lifts. 15.28.1 G.S. Sheet. (CPWD 2018 15.18.1)	Sqm	280.00	121.90	34,132	
10.00	Taking out existing CC interlocking paver blocks from footpath/ central verge, including removal of rubbish etc., disposal of unserviceable material to the dumping ground, for which payment shall be made separately and stacking of serviceable material within 50 metre lead as per direction of Engineer-in-Charge.(RA attached)	Sqm	1792.00	74.98	1,34,364	
11.00	Earth work excavation for foundation of structures upto 3 mtrs. by mechanical means as per drawing and technical specification, including setting out, providing shoring, strutting and bracing, removal of stumps and other deleterious matter, dressing of sides and bottom, filling back the excavated earth to the extent required and utilising I transporting the remaining earth upto 1.00km lead. including cost of labour, materials and HOM etc., complete. do- In all types of soils (KPWD 18-19,SI No.2.23.1,Pg.No.8)	Cum	1445.69	57.20	82,693	
12.00	Earth work excavation for foundation of structures upto 3 mtrs. by mechanical means as per drawing and technical specification, including setting out, providing shoring, strutting and bracing, removal of stumps and other deleterious matter, dressing of sides and bottom, filling back the excavated earth to the extent required and utilising I transporting the remaining earth upto 1.00km lead. including cost of labour, materials and HOM etc., complete.do- Soft rock/ordinary rock (without blasting) (KPWD 18-19,SI No.2.23.2,Pg.No.8)	Cum	168.66	73.70	12,430	

Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks
13.00	Earthwork in excavation for foundation of structures by Mechanical means as per drawing and technical specification including setting out construction of shoring, strutting, barricading, danger light, bracing, removal of slumps and other deteriorious matter, dressing of sides and levelling the bottom of trench to the extent required, utilising the available excavated earth locally for the work etc. complete. (Depth upto 3m). Hard Rock -Any rock Excavation by using mechanical plants/machinery (KUWSDB 18-19, SI.No.vii.1c, Pg.No.7)	Cum	84.33	744.70	62,801	
14.00	KSRB 2.3 : Filling available excavated earth (excluding rock) in sides of foundations upto plinth in layers not exceeding 20 cms. in depth, compacting each deposited layer by ramming after watering with lead upto 50 m. and lift upto 1.5 m. including cost of all labour complete as per specifications. specification. No. KBS 2.9 (KPWD 18-19, SI.No.2.10, Pg No.7)	Cum	620.26	221.10	1,37,139	
15.00	Providing Muram/Gravel Bedding for the pipeline trenches/ at Plith below grade slab , including watering and consolidation by punners etc., complete with all lead and lift as directed including barricading, danger lighting etc., as directed by the Engineer-in-Charge etc., complete, for all type of soils excluding black cotton soil and rock reaches. KUWSDB 18-19, Pg No.9, SI No.6.2	Cum	53.61	284.90	15,272	
16.00	KSRB 2.8 : Providing and Filling in foundation with granite / trap broken metal 100mm. and down size, with approved sand including hand packing, ramming, watering, including cost of all materials and labour with all lead and lift. complete as per specifications. specification. No. KBS (KPWD 18-19, SI.No.2.15, Pg.No.7)	Cum	139.98	2795.10	3,91,247	
17.00	KSRRB M300-14. Excavation for roadwork in all types of soil with hydraulic excavator of 0.9 bucket capacity including cutting and loading in tippers, trimming bottom and side slopes, in accordance with requirements of lines and grades and cross sections, and transporting disposal location up to a lead of 5.00Km and complete as per specifications. MORTH specification No.301 (Including transporting charges, loading and unloading for lead 5km) (Page No 143, SI No : 19.14)	Cum	1195.60	45.10	53,922	
18.00	KSRRB M300-55. Construction of sub-grade transporting to site, spreading, grading to required slope and compacted to meet requirement of Table No. 300-2 complete as per specifications, including cost of earth, watering charges & compaction by vibratory roller to 97% of modified proctors density) MORTH Specification No. 305 (KPWD 18-19, SI.No.19.62, Pg.No.147)	Cum	610.00	620.62	3,78,578	
19.00	KSRRB M400-6.2. Construction of granular sub base by providing close graded crushed stone aggregate of granite/trap/basalt material, spreading in uniform layers with motor on prepared surface, mixing by mix in place methode by rotavator at OMC, and compacting with vibratory power roller to achieve the desired density, complete as per specification. B.By Mix in Place Methode . Close graded granular sub base material as per 400-1 For Grading II material (Page No 155, SI No : 20.5.2)	Cum	183.00	2382.60	4,36,016	

Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks
20.00	KSRRB M600-1.Construction of dry lean cement concrete mix M15 with 1:5:10 OPC cement @160Kgs,with 25mm and down size graded granite/trap/basalt metal coarse aggregate at 0.86cum and fine aggregate @ 0.58cum Sub-base over prepared sub grade with (coarse and fine aggregate confirming to IS:383) aggregate cement ration not to excee 15:1. Aggregate gradation after blending to be as per Table 600-1, cement content to be determined during trail length construction, concrete strength not to be less than 10Mpa at 7 days,mixed in a batching plant,transported to site,laid with a paver with electronic sensor,compacting with 8-10 tonnes double drum vibratory roller,finishing and curing complete as per specifications.Morth specification No.601 (SI No : 22.1.1 of KPWD 18-19)	Cum	122.00	4452.80	5,43,242	
21.00	KSSRRB M600-2.Construction of unreinforced,dowel jointed, plain cement concrete pavement over a prepared sub base with 25mm and down size graded granite metal coarse aggregate with superplastisizer at 3 lts confirming to IS9103-1999 reaffirmed 2008(Coarse and fine aggregate conforming to IS:383) mixed in a batching and mixing plant as per approved mix design,transported to site,laid with a fixed form or slip form paver spread,compacted and finished in a continuos operation including provision of contraction, expansio, construction and longitudinal joints,including groove cutting chrges, joints filler,separation memberane, sealent primer, joints sealant, debonding strip, dowel bars at 4.5m intervals, tie rod, admixtures as approved, curing compound,finishing to lines and grades as per drawing complete as per sprcifications MORTH specification No.602.do with M40 (420Kg per cum Cement,C.A,0.67 cum F.A.044Cum (Page No 176,SI No : 22.2.2)	Cum	280.60	6341.50	17,79,425	
22.00	Providin and fixing pre cast solid concrete Kerb stones made out of CC 1:2:4 with top and bottom width 114 and 165mm respectively,400mm high and 450mm in length finished with CM 1:3 Plastering and finishing cutting, including cost of all materials,labour,hire charges of machinery,loading,unloading,lead and lift,transportation etc.,complete (Page No 25,SI No : 5.3)	Rmt	1300.00	463.10	6,02,030	
23.00	KSRRB 800-1. Painting two coats after filling the surface with synthetic enamel paint in approved shades on new plastered concrete surfaces, with materials, labour complete as per MORTH specifications section 8. (SI No : 24.1 of KPWD 18-19)	Sqm	474.50	88.00	41,756	
24.00	KSRRB M800-29.3. Cable Duct Across the road KSRRB M800-29.1. Providing and laying of a reinforced cement concrete pipe duct, 300 mm dia, across the road (new construction), extending from drain to drain in cuts and toe of slope to toe of slope in fills, constructing head walls at both ends, providing a minimum fill of granular material over top and sides of RCC pipe as per IRC:98-1997, bedded on a 0.3 m thick layer of granular material free of rock pieces, outer to outer distance of pipe at least half dia of pipe subject to minimum450 mm in case of double and triple row ducts, joints to be made leak proof, invert level of duct to be above higher than ground level to prevent entry of water and dirt, all as per IRC: 98 - 1997 and approved drawings complete as per specifications. Case-III :Triple row for three utility services. (PWD SR 2018-19,SI.No.24.36)	Rmt	45.00	5524.20	2,48,589	

Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks
25.00	KSRRB M400-6.1. Construction of granular sub-base by providing close graded crushed stone aggregates of granite / trap / basalt material, mixing in a mechaical mix plant at OMC, carriage of mixed material to work site, spreading in uniform layers with motor grader on prepared surface and compacting with Plate compactor to achieve the desired density, complete as per specifications. A. Plant Mix Method. - Close graded granular sub-base material as per 400-1 For Grading- II Material (RA Attached)	Cum	337.71	2640.00	8,91,554	
26.00	KSRB 4-1.6 ; Providing and laying in position plain cement concrete of Mix 1:2:4 with OPC @ 240kgs, with 20mm and down size graded granite metal coarse aggregates @ 0.878 cum and fine aggretes @ 0.53cum, machine mixed, concrete laid in layers not exceeding 15 ems. thick, well compacted, in foundation, plinth and cills, including cost of all materials, labour, HOM curing complete as per specifications. Specification No. KBS 4.1, 4.2 (KPWD 18-19,SI No.4.6.2,Pg.No.13)	Cum	157.72	6490.00	10,23,593	
27.00	KSRB-3.2: Providing and injecting chemical emulsion for Pre-constructional Anti-Termite Treatment , creating continuous chemical barrier under and around the column pits, walls, trenches, basement excavation, top surface of the plinth filling, junction of wall and floor, along the external perimeter of building, expansion joints, over the top surface of consolidated earth on which apron is to be laid, surrounding of pipes and conduits, with chloropyriphos emulsifiable concentrates of 20% concentration at 3.19 Litre/sqm., including cost of chemical, diluting in water to one percent concentration, labour, HOM complete as per specifications. (Plinth area of the building at ground floor only shall be measured) Specification No. KBS: 3.2.6 I 3.2.7 (KPWD 18-19,S.I. No.3.2)	Sqm	234.69	115.50	27,106	
28.00	KSRB 4.2.1 Providing and laying in position reinforced cement concrete of Design Mix M25 with OPC@ 340kgs, with 20mm and down size graded granite metal coarse aggregates @0.70 cum and fine aggretes @ 0.47cum, with super plasticisers@ 3 liters confirming to IS 9103-1999 reafirmed-2008 at machine mixed, concrete laid in layers not exceeding 15 ems thick, vibrated for all works in foundation for footings , pedestals, retaining walls, return walls, walls (any thickness) including attached pilasters, columns pillars, posts, struts, buttresses, bed blocks, anchor blocks & plinths etc., including cost of all materials, labour, HOM curing, complete but excluding cost of reinforcement as per specifications. Specification No. KBS 4.1, 4.6 (KPWD 18-19,SI No.4.10,Pg.No.14)	Cum	176.53	6817.80	12,03,514	
29.00	KSRB 4.2.7 Providing and laying in position reinforced cement concrete of design Mix M25 with OPC @ 340kgs, with 20mm and down size graded granite metal coarse aggregates @0.70cum and fine aggretes @ 0.47cum, with super plasticisers @31ts confirming to IS9103-1999 Reaffirmed-2008, machine mixed, concrete laid in layers not exceeding 15 ems thick, vibrated for all works in ground floor level for roof slabs, staircase, lintels and beams retaining walls, return walls, walls (any thickness) including attached pilasters, columns, lintles, pillars, posts, struts, buttresses, string or lacing courses, parapets, coping, bed blocks, anchor blocks, plain window cills, fillets etc., including cost of all materials, labour, HOM curing, complete but excluding cost of reinforcement as per specifications. Specification No. KBS 4.1, 4.6 (KPWD 18-19,SI.No.4.12,Pg No.14)					

Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks
	Ground Floor	Cum	51.77	7074.10	3,66,203	
	First Floor Beam,Column,Slab	Cum	43.60	7140.10	3,11,309	
	Second Floor Beam and Column	Cum	91.46	7206.10	6,59,060	
	Terrace Floor	Cum	61.16	7272.10	4,44,793	
30.00	Providing and laying M25 grade RCC jacketing work around the existing column including chipping of existing column,applying epoxy as a bonding agent between old concrete and new concrete and required shuttering work,curing, including cost of all material and labour etc. Complete.(Note:Reinforcementsteel will be pais sepatetaly) (RA Attached)	Cum	15.11	15658.05	2,36,655	
31.00	KSRB 4-6.1 : Providing and removing centering, shuttering, strutting, propping etc., and removal of form work for foundations, footings , bases of columns for mass concrete including cost of all materials, labour complete as per specifications. Specification No. KBS 4.6.2 (KPWD 18-19,Sl.No.4.28,Pg No.16)	Sqm	1230.08	289.30	3,55,862	
32.00	KSRB 4-6.7 :Providing and removing centering, shuttering, strutting, propping etc., and removal of form work for sides and soffits of beams , beam haunchings, cantilever girders, bressumers and lintels not exceeding 1m in depth including cost of all materials, labour complete as per specifications. Specification No. KBS 4.6.2 (KPWD 18-19,Sl.No.4.34,Pg No.17)					
	Plinth Beam	Sqm	138.31	321.20	44,426	
	First Floor Beam	Sqm	44.16	321.20	14,184	
	Second Floor Beam	Sqm	240.43	321.20	77,227	
	Third Floor	Sqm	594.33	321.20	1,90,899	
33.00	KSRB 4-6.5 : Providing and removing centering, shuttering, strutting, propping etc., and removal of form work for columns , pillars, post and struts, square I rectangular/ polygon in plan including cost of all materials, labour complete as per specifications. Specification No. KBS 4.6.2 (KPWD 18-19,Sl.No.4.32,Pg.No.16)					
	Foundation to Plinth and Plinth to First Floor	Sqm	301.64	501.60	1,51,305	
	First Floor to Second Floor	Sqm	249.91	501.60	1,25,356	
	Second Floor to Roof	Sqm	118.37	501.60	59,373	
34.00	KSRB 4-6.2 : Providing and removing centering, shuttering, strutting, propping etc., and removal of formworkfor suspended floors, landings, balconies and likes, thickness upto 200 mm including cost of all materials, labour complete as per specifications. Specifications No. KBS 4.6.2. do- - 0 to 5 mts (KPWD 18-19,Sl.No.4.29.2,Pg.No.16)					
	First Floor Slab	Sqm	52.85	448.80	23,720	
	Second Floor Slab	Sqm	50.54	448.80	22,683	
	Third Floor	Sqm	297.94	448.80	1,33,716	
35.00	KSRB 4-6.11 :Providing and removing centering, shuttering, strutting, propping etc., and removal of form work for Stairs (excluding landing) except spiral staircase including cost of all materials, labour complete as per specificaliton. Specification No. KBS 4.6.2 (KPWD 18-19,Sl.No.4.38,Pg.No.17)					
	Second Floor	Sqm	22.87	617.10	14,115	

Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks
36.00	KSRB 4-6.10 :Providing and removing centering, shuttering, strutting, propping etc., and removal of form work for chajja , corbels etc., including edges including cost of all materials, labour complete as per specifications. Specification No. KBS 4.6.2 (KPWD 18-19,Sl.No.4.37,Pg.No.17)					
	Second Floor	Sqm	60.06	361.90	21,736	
37.00	KSRB 4-6.4 : Providing and removing centering, shuttering, strutting, propping etc., and removal of form work for vertical surface such as walls at any thickness, including attached pilasters, buttresses, plinth cills and string courses cost of all materials, labour complete as per specifications. Specification No. KBS 4.6.2	Sqm	218.88	397.10	86,917	
38.00	KSRB 4-9.2 : Providing T.M.T steel reinforcement for R.C.C work including straightening, cutting, bending, hooking, placing in position, lapping and l or welding wherever required, tying with binding wire and anchoring to the adjoining members wherever necessary complete as per design (laps, hooks and wastage shall not be measured and paid) cost of materials, labour, HOM complete as per specifications. Specification No. KBS 4.6.3 TMT bars Fe 500 (KPWD 18-19,Sl.No.4.46.2,Pg No.18)					
	Ground Floor	MT	24.31	77860.20	18,92,406	
	First Floor	MT	5.21	78681.90	4,10,281	
	Second Floor	MT	9.32	79503.60	7,41,197	
	Third Floor	MT	6.40	80325.30	5,14,367	
39.00	Providing fusion bonded epoxy coating not less than 175 microns thickness and upto 300 microns to reinforcement of all diameters as per IS: 13620-1993 including testing of coating at plant The rate is inclusive of cost on account of careful handling, PVC coated binding wire instead of GI Binding wire, touch up material supplied by coating agency, repair work, loading, unloading and straightening of bent rods etc., complete as per specification and as directed by the Engineer in charge. do For 10mm to 16mm dia bars (KPWD 18-19,Sl.No.7.21.1,Pg.No.40)	MT	45.25	11588.50	5,24,333	
40.00	Structural steel work riveted, bolted or welded in built up sections, trusses and framed work, including cutting, hoisting, fixing in position and applying, priming coat of approved steel primer all complete. (CPWD 2018, Sl.No.10.2, Pg.No.183)	MT	2.24	101750.00	2,27,920	
41.00	Refixing the existing Structural steel (Roof Truss) work riveted, bolted or welded in built up sections, trusses and framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer all complete (Rate Analysis)	Kg	7280.00	20.40	1,48,512	
42.00	Fixing corrugated G.S. sheet roofing including vertical / curved surface fixed with polymer coated J or L hooks, bolts and nuts 8 mm diameter with bitumen and G.I. limpet washers or with G.I. limpet washers filled with white lead, including a coat of approved steel primer and two coats of approved paint on overlapping of sheets complete (up to any pitch in horizontal/ vertical or curved surfaces), excluding the cost of purlins, rafters and trusses and including cutting to size and shape wherever required. (Rate Analysis)	Sqm	270.00	188.00	50,760	

Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks
43.00	Providing corrugated G.S. sheet roofing including vertical / curved surface fixed with polymer coated J or L hooks, bolts and nuts 8 mm diameter with bitumen and G.I. limpet washers or with G.I. limpet washers filled with white lead, including a coat of approved steel primer and two coats of approved paint on overlapping of sheets complete (up to any pitch in horizontal/ vertical or curved surfaces), excluding the cost of purlins, rafters and trusses and including cutting to size and shape wherever required. 1.00 mm thick with zinc coating not less than 275 gm/m² (CPWD)	Sqm	88.00	1234.25	1,08,614	
44.00	KSRB 14.6: Providing and laying heavy duty cobble stones interlock pavers, using cement and coarse sand for manufacture of blocks of approved size, shape and colour with a minimum compressive strength of 281 kg per sqm over 50mm thick sand bed (average thickness) and compacting with plate vibrator having 3 tons compaction force thereby forcing part of sand underneath to come up in between JOints, final compaction of paver surface JOints into its final level, including cost of materials, labour and HOM complete as per specifications. Specification No. KBS KSRB 14.6-1 : do- heavy duty cobble stones 60mm thick (KPWD 18-19,Sl.No.14.6,Pg.No.103)	Sqm	1078.40	1161.60	12,52,669	
45.00	Providing and laying eco-loc permeable pavers,80mm or equivalent block making machine with strong vibratory compaction, of approved size, design & shape, laid in required colour and pattern over and including 50mm thick compacted bed of coarse sand, filling the joints with line sand etc. all complete as per the direction of Engineer-in-charge.	Sqm	1173.00	2073.00	24,31,629	
46.00	Providing and fixing 15cm wide,45cm overall semi circular plain GS Sheet gutter with iron brackets 40 x 3mm size,bolts,nuts and washers etc, including making necessary connections with rain water pipes complete, 0.8mm thick with zinc coating not less than 275gm/m ² (CPWD 2018,Sl.No.12.7.1,Pg.No.211)	Rm	40.00	765.00	30,600	
47.00	Providing and fixing unplasticised PVC pipes with working pressure 10 kg/sq.cm with pipe fittings, clips, making good the floor, including cost of all materials, labour charges, HOM and testing complete as per specifications. do- with 160mm outer dia KPWD 18-19,Sl.No.11.56.4,Pg.No.77	Rm	137.50	1377.20	1,89,365	
48.00	Providing and constructing Laterite size stone masonry including cost and conveyance of all materials curing etc complete as per specification. I.S. 3620/1979 having compressive strength not less then 3.5 N/mm ² for saturated dry samples. For basement in CM 1:6 (Cement 45 kgs/M3) (KPWD 2018-19,42.5.1)					
a	Plinth Masonary	Cum	119.83	3,499.10	4,19,297	
b	For super structure in CM 1:6 (Cement 45 kgs/M3)- Ground Floor (KPWD 2018-19,42.5.3)	Cum	125.25	3,730.10	4,67,195	
c	For super structure in CM 1:6 (Cement 45 kgs/M3)- First Floor (KPWD 2018-19,42.5.3)	Cum	4.14	4,073.30	16,863	
d	For super structure in CM 1:6 (Cement 45 kgs/M3)- Second Floor (KPWD 2018-19,42.5.3)	Cum	71.15	4,416.50	3,14,246	

Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks
49.00	Providing and constructing non load bearing wall with Light Weight Concrete (Autoclaved aerated concrete) Blocks confirming to IS:2185 (part-3) 1984 and IS 6441-1972 of compressive strength of 3.0N/sq mm with a thin layer of polymer based jointing solvent for super structure with necessary scaffolding, curing including cost of all materials, labour, lead & lift etc, complete as per specifications. with 600x200x150mm size Blocks (KPWD 18-19, Sl.No.6.32.2, Pg.No.31)					
	Ground Floor	Sqm	8.94	1,504.00	13,446	
	First Floor	Sqm	19.28	1,661.00	32,024	
	Second Floor	Sqm	14.56	1,667.60	24,280	
	Third Floor	Sqm	3.62	1,674.20	6,061	
50.00	Providing and constructing non load bearing wall with Light Weight Concrete (Autoclaved aerated concrete) Blocks confirming to IS:2185 (part-3) 1984 and IS 6441-1972 of compressive strength of 3.0N/sq mm with a thin layer of polymer based jointing solvent for super structure with necessary scaffolding, curing including cost of all materials, labour, lead & lift etc, complete as per specifications. with 600x200x230mm size Blocks (KPWD 18-19, Sl.No.6.32.4, Pg.No.31)					
	Ground Floor	Sqm	13.07	2,066.00	27,003	
	First Floor	Sqm	21.72	2,279.20	49,504	
	Second Floor	Sqm	59.67	2,285.80	1,36,394	
	Third Floor	Sqm	32.58	2,292.40	74,686	
51.00	KSRB15-3 : Providing 15mm thick cement plaster in single coat with cement mortar to brick masonry including rounding off corners wherever required smooth rendering, Providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications. do- cement mortar 1:4 (KPWD 18-19, Sl.No.15.13, Pg.No.115)					
	i) Ground Floor	Sqm	117.43	244.20	28,676	
	ii) First Floor	Sqm	113.40	250.80	28,441	
	iii) Second Floor	Sqm	345.28	257.40	88,875	
	iv) Third Floor	Sqm	88.56	264.00	23,380	
52.00	KSRB15-5 : Providing rough cement plastering 15mm thick in single coat with cement mortar to brick masonry for base of dadoing works with sand of approved quality, providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications. do - cement mortar 1:6 (KPWD 18-19, Sl.No.15.31, Pg.No.117)					
	i) Ground Floor	Sqm	113.39	213.40	24,197	
	ii) First Floor	Sqm	113.39	220.00	24,946	
	ii) Second Floor	Sqm	205.74	226.60	46,621	
53.00	Providing applying two coats of wall putty to inside plastered walls and ceiling using white cement putty. Scrapping and levelling the surface using steel blade and preparing the surface even and smooth by using different grade sand papers, including cost of all materials, cost of labour and scaffolding etc., complete as per the specification. (KPWD 18-19, Sl.No.15.106, Pg.No.128)					
	i) Ground Floor	Sqm	117.43	85.80	10,075	
	ii) First Floor	Sqm	113.40	92.40	10,478	
	iii) Second Floor	Sqm	345.28	99.00	34,183	
	iv) Third Floor	Sqm	88.56	105.60	9,352	

Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks
54.00	KSRB15-3 : Providing 12mm thick cement plaster in single coat with cement mortar, to ceiling including rounding off corners wherever required smooth rendering, including providing and removing scaffolding, cost of materials, labour, curing etc., complete as per specification. do- cement mortar 1:4 (KPWD 18-19,Sl.No.15.22,Pg.No.116)					
	Ground Floor	Sqm	101.00	248.60	25,109	
	First Floor	Sqm	98.00	255.20	25,010	
	Second Floor Ceiling	Sqm	280.00	261.80	73,304	
55.00	KSRB15-3 : Providing 18mm thick cement plaster in single coat with cement mortar to brick masonry including rounding off corners wherever required smooth rendering, Providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications. do - cement mortar 1:4 (KPWD 18-19,Sl.No.15.16,Pg.No.116)	Sqm	1276.32	288.20	3,67,835	
56.00	Providing and fixing Vitrified glazed tiles of approved make, quality & colour of size 600 x 600 x 10mm thick fixed on bed of 12mm thick cement mortar for flooring, skirting and jointed with neat cement slurry mixed with pigment to mach shade of tiles, including providing spacers at required interval and removing stains, including cost of all mateirals, mortar, labour, etc , Complete as per specification. (KPWD 18-19,Sl.No.14.45,Pg.No.109)					
	Ground Floor	Sqm	48.40	1,240.80	60,055	
	First Floor	Sqm	46.48	1,243.00	57,775	
	Second Floor	Sqm	235.35	1,245.20	2,93,058	
	Terrace Floor	Sqm	245.85	1,247.40	3,06,673	
57.00	KSRB 14.14-5: Providing Ceramic tiles of approved make, shade and size for flooring, treads of steps and landings laid on a bed of 12mm thick, cement mortar 1 3 mix, flush pointing with white cement using colour pigment , including cost of materials, labour, curing, complete as per specifications. for Ceramic Tiles of size 30x30cms, 6mm thick (KPWD 18-19,Sl.No.14.36.2,Pg.No.108)					
	Ground Floor	Sqm	12.10	1,332.10	16,118	
	First Floor	Sqm	10.50	1,334.30	14,010	
	Second Floor	Sqm	10.50	1,336.50	14,033	
58.00	KSRB 14.3 Providing and laying flooring and steps machine cut granite slabs 40mm thick on cement mortar bed 1:6, 25 mm thick, and pointed with cement mortar 1:3 over existing cement concrete bed, including cost of materials, mortar, labour, curing complete as per specifications. Specification No. KBS 14.26	Sqm	20.18	2,764.30	55,784	
59.00	Providing and fixing colour glazed tiles of size 300mmx600mm for walls with borders of size 300x100mm, set in Cement Mortar 1:3 and pointed with white cement with matching colour pigment with necessary curing, cleaning including providing and removing scaffolding wherever necessary etc., complete. The work includes cost of all materials, mortar, labour charges for all items of work, hire charges for equipment etc., complete as per specification. (KPWD 18-19,Sl.No.14.64,Pg.No.112)					
	Ground Floor	Sqm	113.39	1,334.30	1,51,296	
	First Floor	Sqm	113.39	1,336.50	1,51,546	
	Second Floor	Sqm	113.39	1,338.70	1,51,795	

Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks
60.00	Providing and Fixing Laterite Stone Cladding 25mm thk (polished) with an adhesive over existing cement palster surface with two coat of polish,including all lead and lifts,scaffoldingetc. and complete.	Sqm	72.88	2,500.75	1,82,255	
61.00	Providing and fixing of wall cladding using 20 mm thick gang saw water cut granite in CM 1:3 proportion cut to required shape patron with paper joint finished with cement mortar using white cement and colour pigments to match the colour of slab making through jointing with sealant, making holes 25mm x 12mm grooves in JOints including cost of all materials, mortar, labour, curing etc., complete as per specification. do- with grey granite 20mm thick gang saw with minimum width 1200 mm					
	Ground Floor	Sqm	7.98	2,692.80	21,489	
	First Floor	Sqm	7.98	2,694.80	21,505	
	Second Floor	Sqm	7.98	2,696.80	21,520	
	Third Floor	Sqm	7.98	2,698.80	21,536	
62.00	Providing and laying platform using prepolished, water cut I gang saw 40mm thick telephonic Black Granite. laid on existing vertical -supports and fixing in CM 1:3 proportion. Including cutting to required shape, pattern with paper joints, including full rounding for nosing, finished with cement mortar, pointed with colour pigments to match the colour of slab making through jointing with sealant, making holes 25mm x 12mm grooves in JOints including cost of all materials, mortar, labour, curing etc., complete as per specification. (KPWD 18-19,Sl.No.14.52,Pg.No.110)					
	Ground Floor	Sqm	1.43	3,877.50	5,525	
	First Floor	Sqm	2.48	3,879.50	9,631	
	Second Floor	Sqm	2.48	3,881.50	9,636	
63.00	KSRB 15-15.1 • Providing and applying painting in two coats with plastic emulsion paint of approved brand on wall surface to give an even approved shade after thoroughly brushing the surface, free from mortar drops and other foreign matter including preparing the surface even and sand paper smooth, cost of materials, labour, complete as per specifications.do- with primer (KPWD 18-19,Sl.No.15.51.2,Pg No.119)	Sqm	801.20	99.00	79,319	
64.00	Providing external walls with texture finish using approved brand paint, applied uniformly in three coats over one coat of primer including cost of all materials, machineries, labour, transportation, loading and unloading, all lead and lift and all other incidental charges including scaffolding and removing stains, complete as per specifications. (KPWD 18-19,Sl.No.15.103,Pg No.127)	Sqm	2423.31	374.00	9,06,316	

Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks
65.00	KSRB 10-3 :Providing and laying integral cement based waterproofing treatment including preparation of surface as required for treatment of roofs, balconies, terraces etc , consisting of following application. (a) Applying and grouting a slurry coat of neat cement using 2.75 kgsqm of cement admixed with proprietary water proofing compound conforming to 18:2645 over the RCC slab after cleaning the surface before treatment. (b) Laying cement concrete using broken brick bats 25mm to 100mm size with 50% of cement mortar 1:5 admixed with proprietary water proofing compound conforming 18:2645 over 20mm thick layer of cement mortar 1:5 admixed with proprietary water proofing compound to required slope and treating similarly the adjoining walls upto 300mm height including rounding off junctions of walls and slabs. (c) After two days of proper curing, applying a second coat of cement slurry admixed with proprietary water proofing compound (d) Finishing the surface with 20mm thick joint less cement mortar of mix 1:4 admixed with proprietary water proofing compound and finally finishing the surface with trowel and neat cement slurry and making of 300x300mm square. (e) The whole terrace so finished shall be flooded with water for a minimum period of two weeks for curing and for final test including cost of materials, labour complete as per specifications. (KPWD 18-19,Sl.No.10.2,Pg.No.68)	Sqm	260.40	1112.10	2,89,591	
66.00	Waterproofing of RCC Terrace I podium slab I toilet I utilities I water retaining structure by preparing the surface by chipping and cleaning and Grouting of Honey comb, voids,cracks I construction joints with cement slurry (1kg cement added in 10 ltr of water) added with 100gm of inorganic accelerator, followed by spraying of liquid biological modified alkaline earth silicates@ 040 ltr per sqm on whole surface to reduce the micro porosity and allowing it to dry, curing the surface for the silicates to penetrate deeper into the concrete and spraying waterproofing impregnate liquid containing silane and silanollinear copolymer@ 0.50 ltr per sqm and finally applying polymer slurry made out of cross linked acrylic I styrene I butadiene & cement in the ratio of 1:0.1, @ 0.50kgsqm on the whole surface, including all labour charges tools and equipments, all complete as per the specification (KPWD 18-19,Sl.No.10.5.1,Pg.No.69)	Sqm	36.30	578.60	21,003	
67.00	KSRB 9.4-1 : Providing wood frames of doors, windows, clerestory windows, ventilators and other frames, wrought, framed or assembled including making plaster grooves (excluding cost of cement concrete and side clamps), but including cost of materials, labour, HOM complete as per specifications. Specification No. KBS 9.33KSRB 9.4-3 : -do - Mathi I Nandi wood frames (KPWD 18-19,Sl.No.9.12,Pg.No.53)	Cum	0.26	1,12,357.30	28,914	
68.00	KSRB 9.5 : Providing and fixing in position fully panelled wood shutters for doors, with styles and rails of 40mm. thick with bottom and lock rails 180mm wide top rail and styles 100mm wide as per drawing and panels of 25mm thick including cost of materials, labour, HOM complete as per specifications. (excluding cost of fixtures) Specification No. KBS 9.34KSRB 9-6.3 :do- MathiiNandi wood styles and rails of 35mm thick (KPWD 18-19,Sl.No.9.19,Pg.No.53)					
	Ground Floor	Sqm	8.82	5,517.60	48,665	
	First Floor	Sqm	8.82	5,522.00	48,704	
	Second Floor	Sqm	6.30	5,526.40	34,816	
	Terrace Floor	Sqm	5.04	5,530.80	27,875	

Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks
69.00	<p>SOLID PANEL PRELAM PVC DOOR SHUTTER Providing & fixing 30mm thick factory made rigid foam Prelam Panelled Door Shutters made from M.S. tube of 19x19mm, 19 gauge for styles and 15x15mm for top & bottom rails, covered with heat moulded Prelaminated PVC C Channel of 5mm thick sheet & 30x50mm wide to form styles & 5mm thick & 75mm wide Prelaminated PVC Sheets for top rail, lock rail & bottom rail on either side & 5mm thick, 20mm wide cross PVC sheet as gap insert for top rail & bottom rail, Panelling of 5mm thick PVC sheet Prelaminated on either side fitted in the M.S. frame, Sealed to the styles & rails with PVC Designer beading on either side & joined together with solvent cement adhesive etc., Complete as per manufacturers specification & direction of Engineer-in-charge fixed to frames with 3 nos of 75mm. Aluminium hinges.do- with both side prelam (KPWD 18-19,Sl.No.9.85,Pg No.60 & 61)</p>					
	Ground Floor	Sqm	3.78	4,120.60	15,576	
	First Floor	Sqm	3.78	4,125.00	15,593	
	Second Floor	Sqm	7.56	4,129.40	31,218	
70.00	<p>Providing and fixing pre fabricated non-monolithic R.C.C. Door Frames factory manufactured in separate parts and assembled at bolt nuts system with mechanical table vibrating as per IS 6523-1983 with using M25 concrete as per IS 456 with a cross section of 60 mm x 100 mm reinforced with 1.70 kg of TMT steel reinforced with 3 Nos. of 6 mm dia Main TMT bars and 6 mm Dia TMT stirrups welded at 40 em c/c in triangle shape per meter length of door frames, including cost of steel and fabrication charges having 3/4 No. Stainless Steel hinges plate attachment made of 165 mm x 25 mm x 2.5 mm Stainless Steel Flat welded with required iron rods and flats with drilling for fixing flat CSK Head Machine screws and nut made out of 304 grade stainless steel screws, nut and MS square nut of size 8 x 8 square and length 10 mm and making necessary provision in concrete for fixing aldrops, tower bolts and hold fasts etc., complete including two coats of oil based enamel primer providing without cill for shutter thickness upto 30 mm, 21 days tank immersed curing including cost of labour, materials, HOM etc., complete excluding the cost of door Fixtures as per the direction of Engineer (KPWD 18-19,Sl.No.9.98,Pg.No.63 & 64)</p>					
	Ground Floor	Rmt	9.90	980.10	9,703	
	First Floor	Rmt	9.90	984.50	9,747	
	Second Floor	Rmt	19.80	988.90	19,580	
71.00	<p>Providing and fixing Single shutter glass door of 12mm thick plain toughened glass. The door is fixed by using any approved make hardware fitting like patch fitting, pivot, floor machine, locking arrangements and suitable SS door rails with floral glass etching for 1/3 portion of door area etc complete. The rate includes cost of all materials, labour, hire of tools & machineries, and as per specification.</p>	Sqm	20.16	9,828.50	1,98,143	

Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks
72.00	Providing and fixing of Louvered ventilator made out of multi chambered UPVC (Matching to RAL-9016) sections and with minimum TiO ₂ (Titanium Dioxide) at 6PHR with TPV (Thermo plastic Vulcanized) and lead free with gaskets -grey colour having isolated drainage and reinforced with Galvanized Iron profile through-out the ventilator frame.The frame having overall size of 39mm x 39mm with GI reinforcement of 1mm thickness.Louver Clip in Aluminium (Powder Coated in white) will be used on the frame along with plastic parts of fixing the 4mm pin head glass.Wall thickness of frame shall be 2mm.Maximum possible size - 1000mm x 1000mm (KPWD 18-19,Sl.No.38.44.2,Pg.No.308)	Sqm	6.75	3,995.20	26,968	
73.00	Providing and fixing 304- grade stainless steel hand rails of 14-gauge pipes for Ramps staircase made out of stainless steel hallow pipes, using 50mm dia for verticals @1.60 mtr c/c fixed to the ramps or steps by drilling with bolts and 100mm dia MS base plates 10mm gauge for fixing of Vertical pipes 4 - Nos anchor bolts & 40mm dia pipes fixed horizontally for 2-rows top, one pipes fixed with vertical pipes another one fixed with elbows and 25mm dia pipes are fixed horizontally for 2-rows below top measure@ equal intervals including cutting, welding, bending wherever necessary with suitable caps @ tops, bottoms & corners finishing with mat l shining etc., complete including cost and conveyance of all materials, labour for all items of work, HOM with all lead and lift, loading and unloading, transportation charges and all other incidental charges etc., complete as per specification and directions of the Engineer-in-charge of the work. Ramps or Staircase for physically challenged. (KPWD 18-19,Sl.No.7.39,Pg.No.45)	Sqm	19.20	5,910.30	1,13,478	
74.00	Providing and fixing M.S. Hand railing for Balcony/Staircase etc., with 50mm dia. M.S. hollow pipe of 14 gauge, welded to 20mmx20mm M.S. square rod placed vertically, spaced at 100mm at regular intervals of 600mm. These vertical rods laterally tied to 3 horizontal rods spaced at equal interval. These assembly is fixed to concrete by using expansion bolts and welding the same to reinforcement bars and making good the surface. All the joints and sections should be cut to length, welded and grinded wherever necessary etc., complete. The work includes cost of all materials, labour charges for all items of work, hire charges for welding, cutting and grinding equipment, and electricity charges, etc., complete as per specification and drawing.	Sqm	38.00	3,124.00	1,18,712	
75.00	Providing and fixing anchor bolts as specified in RCC Drawings (KPWD 18-19,Code No.0764)	Kg	1,152.00	44.00	50,688	
76.00	KSRB 8.7-5 : Providing and fixing in position 12mm thick plaster of paris (Gypsum anhydrous) for ceiling reinforced with hessian cloth flat surface with ceiling tiles up to a height of 5 m above floor level over aluminium strips 25mm x 6mm and rendered smooth with plaster of paris including cost of materials, labour, curing complete as per specifications. KPWD 18-19,Sl.No.8.24	Sqm	485.00	1,283.70	6,22,595	

Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks
77.00	<p>KSRB 1.11 : Providing and fixing in position aluminium windows and ventilators as per approved drawings with sliding shutters using three track window frame of size 92x31.75mm bottom section 1.3mm thick, weight 1.07kg/m; sides and top sections 1.3 mm, thick, weight 0.933 kg/m.shutter frame section comprising top and bottom section of size 40mmx18mm, wall thickness 1.25mm. weight 0.417 kg./m. shutter side outer 40mmx18mm. wall thickness 1.25mm. weight 0.417 kg/m, shutter interlock section 40mmx26. 7mm wall thickness 1.1 mm. thick, weight 0.469 kg/m, the shutters mounted on nylon rollers with approved quality of fixtures such as aluminium handles tower bolts etc.; providing and fixing 5.5mm. thick plain glass for shutters fitted with rubber beading all aluminium sections including cutting to required length, joints mitred subdividing the frame tenoned and rivetted, in the assembled frame, stiffened with end clips for corners, angles etc., and fixed to the walls, lintels, floor beams/cills as the case may be, with necessary steel screws, raul plugs or teak wood gatties including cutting masonry or concrete and making good the original surface using cement mortar.</p> <p>do- using aluminium section anodized to 12- 15 microns.</p>					
	Ground Floor	Sqm	6.84	4,785.00	32,729	
	Second Floor	Sqm	27.00	4,798.20	1,29,551	
78.00	<p>Providing , fabricating, assembling and fixing in position Aluminium partition using 101.60mm x 44.45mm x 3.18mm aluminium, mat finish or glossy finish , anodized sections combination of plain, single groove and double groove members should not exceed 0.60mc/c and bottom member of required lengths, joints mitred and corner grinded sub dividing assembled frame should be stiffened with corner angles. Stripped and fixed with screws rawl plug and teakwood guttas to RCC column or masonry on sides. RCC lintels or beams at top and mosaic floor at bottom; including cutting chistelling and making good with cement mortar to match the surface . Providing and fixing 12mm. thick prelaminated sheet (Ecoboard - exterior grade) of approved colour for bottom panel of maximum height 0.9m, and 5.50 mm thick plain or pin headed glass for middle panel and top panel with glazing clips pi 19.05mm.x17.30mm.1.00mm.</p> <p>All the aluminium sections used should be treated for removal of any rust and prevention of further rust formation and coated with greasy materials for non adherence of mortar or any other sticky materials: The vertical members should be embedded in the flooring by making suitable size holes and fixing with cement mortar. All the frame should be thoroughly cleaned free from rust, scale or dirt. work should be carried out as per direction of engineer-in-charge of the work with all lead and lift as per Chief Architect's drawing etc., complete to a degree of perfection.</p> <p>do- using aluminium section powdered coated to a minimum of 60-70 microns with exterior durable pure polyester grade powder of approved quality.</p>	Sqm	287.71	2,860.00	8,22,856	
79.00	Providing and Fixing Handcarving Cornice and Bracket made up of Burma Wood as per the drawings and as instructed by Architect.	Sqm	4.00	6,994.00	27,976	

Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks
80.00	Providing precast cement concrete Jali 1:2:4 (1 cement : 2 coarse sand(zone-III) : 4 graded stone aggregate 6mm nominal size), reinforced with 1.6 mm dia mild steel wire, including centering and shuttering, roughening cleaning, fixing and finishing in cement mortar 1:3 (1 cement: 3 fine sand) etc. complete, excluding plastering of the jambs, sills and soffits. 50 mm thick (CPWD 2018,Sl.No.5.18.1,Pg.No.98)	Sqm	20.00	1,474.05	29,481	
81.00	Structural Glazing Works					
81.01	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). The weight of aluminium extruded section shall be taken for purpose of payment.	Kg	840.00	370.45	3,11,178	
81.02	Double Glazing Grid: 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: (a) 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:	Sqm	168.00	2,949.30	4,95,482	
	(b)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 Dimentional 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. (c)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.					

Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks
	<p>(d) 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</p> <p>(e) 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,</p>					
	<p>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 subhead. 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 sqm. up to two decimal places.</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 NABL accredited lab or by any other accreditation body which operates in accordance with ISO / IEC 17011 and accredits labs as per ISO/ IEC 17025.</p>					

Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks
	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 1500p) as per ASTM E-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 design wind pressure without any failure) as per ASTM E-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 2000 ml					
81.03	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 strengthened 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.	Sqm	168.00	3,250.95	5,46,160	
	(Payment for fixing of IGU Panels in the curtain glazing is included in cost of item No.25.2) 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. (i) 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.					
82.00	Providing and Fixing SS 304 Outdoor Dustbin (Pivoted Type and Mounted on SS Poles) of 55 liters capacity all complete to the satisfaction of the Engineer in charge. (NON SOR Item)	Nos.	5.00	7,500	37,500	
83.00	Road Marking with hot applied Thermoplastic Compound with Reflectrising Glass Beads on Concrete Surface: Providing and laying of hot applied thermoplastic compound 2.5mm thick including reflectorising glass beads at 250 gms and 2 ltr of primer per sqm area, thickness of 2.5mm is exclusive of surface applied glass beads as per IRC:35. The finished surface to be level, uniform and free from streak and holes complete as per specifications. MORTH specification No.803 (KPWD 18-19, SI No : 24.15)	Sqm	168.30	472	79,421	

Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks
84.00	Fabricating, providing and erecting in position of M S Ornamental security Grill Gate/Fencing on compound wall without hot dip using 75 x 12mm M S Flat for around frame work with verticals at the centre and horizontal centre support M S Square of 20 x20 mm of different heights as shown in the drawing are to be fixed at 16 cms C/C for square bars of full height and at 8cms C / C for bottom rods providing ornamental C I Designers at the bottom and C I arrows in the middle and top. The entire frame work is to be fixed by means of expansion bolts to the brick pillars with necessary drilling holes. the work includes providing two coats of enamel painting over one coat of red lead ready mix primer coat etc complete cost of all labour, painting, erection charges using hoist pulley cranes with all lead and lift, loading, transporting and unloading using hoist pulley cranes, scaffolding charges and all other incidental charges required for successful completion of the work as per specification and drawings (KPWD 18-19, Pg. NO. 41, SI. No. 7.31)	Kg	396.00	164	64,904	
85.00	Providing and Fixing SS Steel Chairs as specified by Architect.	Nos.	10.00	9,000	90,000	
86.00	P/F FRP Water gully cover with frame (25T) 600mmx500 mm on SWD (Rate analysis attached)	Nos.	47.00	7,912	3,71,877	
87.00	Providing and fixing of S.S. Bollards(SS304) on footpath as specified and directed by Engineer -in-charge (NON SOR Item)	Nos.	20.00	4,500	90,000	
88.00	Supplying and Fixing Passenger elevator of 8 Person Capacity of approved make and as per directed by Engineer in charge. (CPWD Plinth Area Basis Rate-2019)	Nos.	1.00	16,00,000	16,00,000	
89.00	Extra Lead for Disposing off unserviceable materials upto 10 Km beyond initial Lead of 5km Item No 17.4 KSRRB M100-4.1- Debris	Cum	180.02	91.30	16,436	
90.00	Extra Lead for Disposing off unserviceable materials upto 10 Km beyond initial Lead of 5 km Item No 17.4 KSRRB M100-4.1- Earth	Cum	1,078.42	90.86	97,985	
		Total			3,15,74,240	

**Assistant Engineer
MSCL Mangaluru**

**Assistant Executive Engineer
MSCL Mangaluru**

**Executive Engineer
MSCL Mangaluru**

**General Manager Technical
MSCL Mangaluru**

Measurement Sheet -Civil Work-UPOR

Sr. No.	Description	Unit	No's	L	B	H	Qty.
1	KSRRB M200-11.1. Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned, including removal and disposal of top organic soil not exceeding 150 mm in thickness complete as per specifications and as directed by engineer in charge. II. By Mechanical Means: A. In area of light jungle. MORTH Specification No. 201 (KPWD 18-19,Sl.No.18.15)						
	Provisional Qty	Sqm	1	122.00	100.00		12200.00
		Sqm				Total	12200.00
		Ha				Total	1.220
2	KSRRB M200-12.1. Dismantling of existing structures like culverts, bridges, retaining walls and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts complete as per specifications and as directed by engineer in charge. i) Lime /Cement Concrete. I. By Manual Means: A. Lime Concrete, cement concrete grade M-10 and below. MORTH Specification No. 202 (KPWD 18-19,Sl.No.18.17)						
	Provisional Qty	Cum	1	10.00			10.00
		Cum					10.00
3	KSRRB M200-15.1. Dismantling of existing structures like culverts, bridges, retaining walls and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts complete as per specifications and as directed by engineer in charge. iii) Dismantling Stone Masonry. MORTH Specification No. 202 KSRRB M200- 15.2. do- B. Rubble stone masonry in cement mortar. (KPWD 18-19,Sl.No.18.27)						
	Provisional Qty	Cum	1	50			50.00
		Cum					50.00
4	KSRRB M200-32. Removal of Telephone /Electric poles including excavation and dismantling of foundation concrete and lines under the supervision of concerned department, disposal with all lifts and stacking the serviceable and unserviceable material separately complete as per specifications. MORTH Specification No. 202 (KPWD 18-19,Sl.No.18.57)						
	Electric Pole-Provisional Qty.	Nos	5				5.00
		Nos					5.00

Sr. No.	Description	Unit	No's	L	B	H	Qty.
5	KSRRB M200-14.1. Dismantling of existing structures like culverts, bridges, retaining walls and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts complete as per specifications and as directed by engineer in charge. KSRRB M200-14.2. do- Dismantling brick/Tile work B. In cement mortar. (KPWD 18-19,Sl.No.18.23)						
	Provisional Qty.	Cum	1	50		0.1	5.00
		Cum					5.00
6	KSRRB M200-15.1. Dismantling of existing structures like culverts, bridges, retaining walls and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts complete as per specifications. iKSRRB M200-17.1. do- v) Steel work in all types of Sections upto a Height of 5 m above plinth level excluding Cutting of Rivet. - A. Including dismembering." (KPWD 18-19,Pg.No.140,Sl.No.18.33)						
	Roof Truss	Mt	1	10			10.00
	Add 30% Qty.						3.00
		Mt					13.00
7	Dismantling doors, windows and clerestory windows (steel or wood) shutter including chowkhats, architrave, holdfasts etc. complete and stacking as directed by Engineer in charge with all leads and lifts. Of area 3 sq. metres and below (CPWD 2018 15.12.1)						
	Provisional Qty.						
	Door	Nos.	2				2.00
	Window	Nos.	2				2.00
		Nos.					4.00
8	Dismantling cement concrete flooring or plain cement concrete work including removing and conveying the debris to distance 10km (within average thickness of 15 ems). including cost of materials, labour, HOM complete as per specifications. (KPWD 18-19,Sl.No.37.51)						
	Provisional Qty	Sqm	1	10	5		50.00
9	Dismantling roofing including ridges, hips, valleys and gutters etc., and stacking the material as directed by engineer in charge with all leads and lifts. 15.28.1 G.S. Sheet. (CPWD 2018 15.18.1)						
	Roof	Sqm	1	20	14		280.00
10	Taking out existing CC interlocking paver blocks from footpath/ central verge, including removal of rubbish etc., disposal of unserviceable material to the dumping ground, for which payment shall be made separately and stacking of serviceable material within 50 metre lead as per	Sqm	1	64	28		1792.00

Sr. No.	Description	Unit	No's	L	B	H	Qty.
11	Earth work excavation for foundation of structures upto 3 mtrs. by mechanical means as per drawing and technical specification, including setting out, providing shoring, strutting and bracing, removal of stumps and other deleterious matter, dressing of sides and bottom, filling back the excavated earth to the extent required and utilising I transporting the remaining earth upto 1.00km lead. including cost of labour, materials and HOM etc., complete. do-In all types of soils (KPWD 18-19,SI No.2.23.1,Pg.No.8)						
	Footing Excavation						
	F1	Cum	2	2.2	2.4	3.00	31.68
	F2	Cum	15	2	2.0	3.00	180.00
	Lift Footing	Cum	1	4.4	4.4	3.00	58.08
	Main Gate-Foundation						
	C3,C4,C12,C13	Cum	4	1.800	1.6	3.00	34.56
	Combined Footing-C5 and C6	Cum	2	2.050	1.7	3.00	20.91
	Combined Footing-C7,C8,C9	Cum	1	3.250	1.7	3.00	16.58
	Combined Footing-C1,C2	Cum	1	2.500	1.7	3.00	12.75
	SWD-Excavation	Cum	1	230	1.7	1.25	488.75
						Total	843.31
	Consider 70% Qty in Soil					Total(A)	590.31
	Landscape Area 1	Cum	1	104.000		0.6	62.40
	Landscape Area 2	Cum	1	36.000		0.6	21.60
	Landscape Area 3	Cum	1	6.000		0.6	3.60
	Landscape Area 4	Cum	1	11.000		0.6	6.60
	Landscape Area 5	Cum	1	45.000		0.6	27.00
	Landscape Area 6	Cum	1	35.000		0.6	21.00
	Landscape Area 7	Cum	1	14.000		0.6	8.40
	Landscape Area 8	Cum	1	48.000		0.6	28.80
	Landscape Area 9	Cum	1	171.000		0.6	102.60
	Landscape Area 10	Cum	1	20.000		0.6	12.00
	Landscape Area 11	Cum	1	17.000		0.6	10.20
	Landscape Area 12	Cum	1	20.000		0.6	12.00
	Landscape Area 13	Cum	1	118.000		0.6	70.80
	Landscape Area 14	Cum	1	25.000		0.6	15.00
	Landscape Area 15	Cum	1	107.000		0.6	64.20
	Paved Area Excavation	Cum	1	1255.4		0.31	389.17
						Total (B)	855.37
						Total (A+B)	1445.69
12	Earth work excavation for foundation of structures upto 3 mtrs. by mechanical means as per drawing and technical specification, including setting out, providing shoring, strutting and bracing, removal of stumps and other deleterious matter, dressing of sides and bottom, filling back the excavated earth to the extent required and utilising I transporting the remaining earth upto 1.00km lead. including cost of labour, materials and HOM etc., complete.do- Soft rock/ordinary rock (without blasting) (KPWD 18-19,SI No.2.23.2,Pg.No.8)						
	Footing Excavation						
	F1	Cum	2	2.2	2.4	3.00	31.68
	F2	Cum	15	2	2	3.00	180.00
	Lift Footing	Cum	1	4.4	4.4	3.00	58.08
	Main Gate-Foundation						
	C3,C4,C12,C13	Cum	4	1.8	1.6	3.00	34.56
	Combined Footing-C5 and C6	Cum	2	2.05	1.7	3.00	20.91
	Combined Footing-C7,C8,C9	Cum	1	3.25	1.7	3.00	16.58
	Combined Footing-C1,C2	Cum	1	2.5	1.7	3.00	12.75
	SWD-Excavation	Cum	1	230	1.7	1.25	488.75
		Cum				Total	843.31
	Consider 20% Qty in Soft Rock						168.66

Sr. No.	Description	Unit	No's	L	B	H	Qty.
13	Earthwork in excavation for foundation of structures by Mechanical means as per drawing and technical specification including setting out construction of shoring, strutting, barricading, danger light, bracing, removal of slumps and other deteriorious matter, dressing of sides and levelling the bottom of trench to the extent required, utilising the available excavated earth locally for the work etc. complete. (Depth upto 3m). Hard Rock-Any rock Excavation by using mechanical plants/machinery (KUWSDB 18-19, Sl.No.vii.1c, Pg.No.7)						
	Footing Excavation						
	F1	Cum	2	2.2	2.4	3.00	31.68
	F2	Cum	15	2	2	3.00	180.00
	Lift Footing	Cum	1	4.4	4.4	3.00	58.08
	Main Gate-Foundation						
	C3,C4,C12,C13	Cum	4	1.8	1.6	3.00	34.56
	Combined Footing-C5 and C6	Cum	2	2.05	1.7	3.00	20.91
	Combined Footing-C7,C8,C9	Cum	1	3.25	1.7	3.00	16.58
	Combined Footing-C1,C2	Cum	1	2.5	1.7	3.00	12.75
	SWD-Excavation	Cum	1	230	1.7	1.25	488.75
		Cum				Total	843.31
	Consider 10% Qty in Hard Rock						84.33
14	KSRB 2.3 : Filling available excavated earth (excluding rock) in sides of foundations upto plinth in layers not exceeding 20 cms. in depth, compacting each deposited layer by ramming after watering with lead upto 50 m. and lift upto 1.5 m. including cost of all labour complete as per specifications. specification. No. KBS 2.9 (KPWD 18-19, Sl.No.2.10, Pg No.7)						
	Qty Required For Filling						
	Total Excavated material available for filling.	Cum	1	1614.35			1614.35
	Total Excavation Qty.	Cum	1	1698.68			1698.68
	Soiling	Cum	-1	139.98			-139.98
	PCC	Cum	-1	157.72			-157.72
	SWD void area	Cum	-1	230.00	0.6	1	-138.00
	Landscape soil	Cum	-1	466.20			-466.20
	Deduct Footing Concrete Vol.	Cum	-1	176.53			-176.53
							620.26
15	Providing Muram/Gravel Bedding for the pipeline trenches/ at Plith below grade slab, including watering and consolidation by punners etc., complete with all lead and lift as directed including barricading, danger lighting etc., as directed by the Engineer-in-Charge etc., complete, for all type of soils excluding black cotton soil and rock reaches. KUWSDB 18-19, Pg No.9, Sl No.6.2						
	Paved Area below Pergola	Cum	1	16.2	11.0	0.3	53.61
	Extended area of building	Cum	1	14.0	4.0	0.3	16.80
		Cum				Total	70.41
16	KSRB 2.8 : Providing and Filling in foundation with granite / trap broken metal 100mm. and down size, with approved sand including hand packing, ramming, watering, including cost of all materials and labour with all lead and lift. complete as per specifications. specification. No. KBS (KPWD 18-19, Sl.No.2.15, Pg.No.7)						
	F1	Cum	2	1.8	2	0.23	1.66
	F2	Cum	15	1.6	1.6	0.23	8.83
	Lift Footing	Cum	1	4	4	0.23	3.68
	Paved Area below Pergola	Cum	1	16.2	11.03	0.23	41.10
	Extended area of building	Cum	1	14	4	0.23	12.88
	Main Gate-Foundation						
	SWD	Cum	1	230	1.282	0.23	67.82

Sr. No.	Description	Unit	No's	L	B	H	Qty.
	C3,C4,C12,C13	Cum	4	1.4	1.2	0.23	1.55
	Combined Footing-C5 and C6	Cum	2	1.65	1.3	0.23	0.99
	Combined Footing-C7,C8,C9	Cum	1	2.85	1.3	0.23	0.85
	Combined Footing-C1,C2	Cum	1	2.1	1.3	0.23	0.63
		Cum				Total	139.98
17	KSRRB M300-14. Excavation for roadwork in all types of soil with hydraulic excavator of 0.9 bucket capacity including cutting and loading in tippers,trimming bottom and side slopes,in accordance with requirements of lines and grades and cross sections,and transporting disposal location up to a lead of 5.00Km and complete as per specifications. MORTH specification No.301(Including transporting charges, loading and unloading for lead 5km) (Page No 143,SI No : 19.14)						
	Road	Cum	1	1220.0		0.98	1195.60
18	KSRRB M300-55. Construction of sub-grade transporting to site, spreading, grading to required slope and compacted to meet requirement of Table No. 300-2 complete as per specifications, including cost of earth, watering charges & compaction by vibratory roller to 97% of modified proctors density) MORTH Specification No. 305 (KPWD 18-19,SI.No.19.62,Pg.No.147)						
	Road	Cum	1	1220		0.5	610.00
		Cum				Total	610.00
19	KSRRB M400-6.2.Construction of granular sub base by providing close graded crushed stone aggregate of granite/trap/basalt material,spreading in uniform layers with motor on prepared surface,mixing by mix in place methode by rotavator at OMC, and compacting with vibratory power roller to achieve the desired density,complete as per specification. B.By Mix in Place Methode. Close graded granular sub base material as per 400-1 For Grading II material (Page No 155,SI No : 20.5.2)						
	Road	Cum	1	1220		0.15	183.00
20	KSRRB M600-1.Construction of dry lean cement concrete mix M15 with 1:5:10 OPC cement @160Kgs,with 25mm and down size graded granite/trap/basalt metal coarse aggregate at 0.86cum and fine aggregate @ 0.58cum Sub-base over prepared sub grade with (coarse and fine aggregate confirming to IS:383) aggregate cement ration not to excee 15:1. Aggregate gradation after blending to be as per Table 600-1, cement content to be determined during trail length construction, concrete strength not to be less than 10Mpa at 7 days,mixed in a batching plant,transported to site,laid with a paver with electronic sensor,compacting with 8-10 tonnes double drum						
	Road	Cum	1	1220		0.10	122.00

Sr. No.	Description	Unit	No's	L	B	H	Qty.
21	KSSRRB M600-2.Construction of unreinforced,dowel jointed,plain cement concrete pavement over a prepared sub base with 25mm and down size graded granite metal coarse aggregate with superplasticizer at 3 lts confirming to IS9103-1999 reaffirmed 2008(Coarse and fine aggregate conforming to IS:383) mixed in a batching and mixing plant as per approved mix design,transported to site,laid with a fixed form or slip form paver spread,compacted and finished in a continuous operation including provision of contraction, expansion, construction and longitudinal joints,including groove cutting charges, joints filler,separation memberane, sealant primer, joints sealant, debonding strip, dowel bars at 4.5m intervals, tie rod, admixtures as approved, curing compound,finishing to lines and grades as per drawing complete as per specifications MORTH specification No.602.do with M40 (420Kg per cum Cement,C.A,0.67 cum F.A.044Cum (Page No 176,SI No : 22.2.2)						
	Road	Cum	1	1220.0		0.23	280.60
22	Providin and fixing pre cast solid concrete Kerb stones made out of CC 1:2:4 with top and bottom width 114 and 165mm respectively,400mm high and 450mm in length finished with CM 1:3 Plastering and finishing cutting, including cost of all materials,labour,hire charges of machinery,loading,unloading,lead and lift,transportation etc.,complete (Page No 25,SI No : 5.3)						
	Road Perimeter	Rmt	1	1000.0			1000.00
	Add 30% Extra Qty.						300.00
						Total	1300.00
23	KSRRB 800-1. Painting two coats after filling the surface with synthetic enamel paint in approved shades on new plastered concrete surfaces, with materials, labour complete as per MORTH specifications section 8. (SI No : 24.1 of KPWD 18-19)			Kerb Length			
	Painting	Sqm	1	1300.0		0.365	474.50
24	KSRRB M800-29.3.Cable Duct Across the road KSRRB M800-29.1. Providing and laying of a reinforced cement concrete pipe duct, 300 mm dia, across the road (new construction), extending from drain to drain in cuts and toe of slope to toe of slope in fills, constructing head walls at both ends, providing a minimum fill of granular material over top and sides of RCC pipe as per IRC:98-1997, bedded on a 0.3 m thick layer of granular material free of rock pieces, outer to outer distance of pipe at least half dia of pipe subject to minimum 450 mm in case of double and triple row ducts, joints to be made leak proof, invert level of duct to be above higher than ground level to prevent entry of water and dirt, all as per IRC: 98 - 1997 and approved drawings complete as per specifications. Case-III :Triple row for three utility services. (PWD SR 2018-19,SI.No.24.36)						
	Road Length	Rm	230				230.00
			Nos.	Road C/s Length			
	Consider Duct @ 50m C/C (230/50=5nos.)	Rm	5	9.0			45.00

Sr. No.	Description	Unit	No's	L	B	H	Qty.
25	KSRRB M400-6.1. Construction of granular sub-base by providing close graded crushed stone aggregates of granite / trap / basalt material, mixing in a mechaical mix plant at OMC, carriage of mixed material to work site, spreading in uniform layers with motor grader on prepared surface and compacting with Plate compactor to achieve the desired density, complete as per specifications. A. Plant Mix Method. - Close graded granular sub-base material as per 400-1 For Grading- II Material (RA Attached)						
	Hardscape Area	Cum	1	986		0.15	147.90
	Eco Lock permeable Pavers	Cum	1	1173.00		0.15	175.95
	Area under paragola	Cum	1	13.2	7	0.15	13.86
		Cum				Total	337.71
26	KSRB 4-1.6 ; Providing and laying in position plain cement concrete of Mix 1:2:4 with OPC @ 240kgs, with 20mm and down size graded granite metal coarse aggregates @ 0.878 cum and fine aggretes @ 0.53cum, machine mixed, concrete laid in layers not exceeding 15 ems. thick, well compacted, in foundation, plinth and cills, including cost of all materials, labour, HOM curing complete as per specifications. Specification No. KBS 4.1, 4.2 (KPWD 18-19,SI No.4.6.2,Pg.No.13)						
	Footing PCC						
	F1	Cum	2	1.6	1.8	0.1	0.58
	F2	Cum	15	1.4	1.4	0.1	2.94
	Lift Footing	Cum	1	3.8	3.8	0.1	1.44
	Paved Area below Pergola	Cum	1	16	10.83	0.1	17.33
	Hard Scape Area	Cum	1	986		0.1	98.60
	SWD-Base	Cum	1	230	1.282	0.1	29.49
	Extended area of building	Cum	1	14	4	0.1	5.60
	Main Gate-Foundation						0.00
	C3,C4,C12,C13	Cum	4	1.4	1.2	0.1	0.67
	Combined Footing-C5 and C6	Cum	2	1.65	1.3	0.1	0.43
	Combined Footing-C7,C8,C9	Cum	1	2.85	1.3	0.1	0.37
	Combined Footing-C1,C2	Cum	1	2.1	1.3	0.1	0.27
		Cum				Total	157.72
27	KSRB-3.2: Providing and injecting chemical emulsion for Pre-constructional Anti-Termite Treatment, creating continuous chemical barrier under and around the column pits, walls, trenches, basement excavation, top surface of the plinth filling, junction of wall and floor, along the external perimeter of building, expansion joints, over the top surface of consolidated earth on which apron is to be laid, surrounding of pipes and conduits, with chloropyriphos emulsifiable concentrates of 20% concentration at 3.19 Litre/sqm., including cost of chemical, diluting in water to one percent concentration, labour, HOM complete as per specifications. (Plinth area of the building at ground floor only shall be measured) Specification No. KBS: 3.2.6 I 3.2.7 (KPWD 18-19,S.I. No.3.2)						
	Area below Pergola	Sqm	1	16.2	11.03		178.69
	Extended area of building	Sqm	1	14	4		56.00
		Sqm				Total	234.69

Sr. No.	Description	Unit	No's	L	B	H	Qty.
28	KSRB 4.2.1 Providing and laying in position reinforced cement concrete of Design Mix M25 with OPC@ 340kgs, with 20mm and down size graded granite metal coarse aggregates @0.70 cum and fine aggregates @ 0.47cum, with super plasticisers@ 3 liters conforming to IS 9103-1999 reaffirmed-2008 at machine mixed, concrete laid in layers not exceeding 15 cms thick, vibrated for all works in foundation for footings, pedestals, retaining walls, return walls, walls (any thickness) including attached pilasters, columns pillars, posts, struts, buttresses, bed blocks, anchor blocks & plinths etc., including cost of all materials, labour, HOM curing, complete but excluding cost of reinforcement as per specifications. Specification No. KBS 4.1, 4.6 (KPWD 18-19,SI No.4.10,Pg.No.14)						
	Footing						
	F1	Cum	2	1.400	1.6	0.50	2.24
	F2	Cum	15	1.200	1.2	0.40	8.64
	Lift Footing	Cum	1	3.600	3.6	0.40	5.18
	Main Gate-Foundation						
	C3,C4,C12,C13	Cum	4	1.200	1.0	0.40	1.92
	Combined Footing-C5 and C6	Cum	2	1.450	1.100	0.40	1.28
	Combined Footing-C7,C8,C9	Cum	1	2.650	1.100	0.40	1.17
	Combined Footing-C1,C2	Cum	1	1.900	1.100	0.40	0.84
	Jackating of Column Footing						
	Grid C,E and 1	Cum	2	1.6	1.6	0.30	1.54
	Deduct Existing Column Volume	Cum	-2	0.4	0.2	0.30	-0.05
	Grid A and 2	Cum	1	1.6	1.6	0.30	0.77
	Deduct Existing Column Volume	Cum	-1	0.5	0.2	0.30	-0.03
	Grid F and 1,3	Cum	2	1.6	1.6	0.30	1.54
	Deduct Existing Column Volume	Cum	-2	0.5	0.2	0.30	-0.06
	Grid E and 5	Cum	1	1.6	1.6	1.30	3.33
	Deduct Existing Column Volume	Cum	-1	0.4	0.2	1.30	-0.11
	SWD						
	Base	Cum	1	230.0	1.1	0.10	25.30
	Wall	Cum	2	230.0	0.20	1.00	92.00
	Slab	Cum	1	230.0	0.9	0.15	31.05
		Cum				Total	176.53
29	KSRB 4.2.7 Providing and laying in position reinforced cement concrete of design Mix M25 with OPC @ 340kgs, with 20mm and down size graded granite metal coarse aggregates @0.70cum and fine aggregates @ 0.47cum, with super plasticisers @31ts conforming to IS9103-1999 Reaffirmed-2008, machine mixed, concrete laid in layers not exceeding 15 cms thick, vibrated for all works in ground floor level for roof slabs, staircase, lintels and beams retaining walls, return walls, walls (any thickness) including attached pilasters, columns, lintels, pillars, posts, struts, buttresses, string or lacing courses, parapets, coping, bed blocks, anchor blocks, plain window cills, fillets etc., including cost of all materials, labour, HOM curing, complete but excluding cost of reinforcement as per specifications. Specification No. KBS 4.1, 4.6 (KPWD 18-19,SI.No.4.12,Pg No.14)						
	Plinth Area						
	Plinth Beam RCC						
1	PB1	Cum	1	12.76	0.23	0.45	1.32
2	PB2	Cum	1	10.6	0.23	0.45	1.10
3	PB3	Cum	1	2	0.23	0.45	0.21
4	PB4-Long	Cum	1	3.2	0.23	0.45	0.33
5	PB4-Short	Cum	1	1	0.23	0.45	0.10
6	PB5	Cum	1	3.25	0.23	0.45	0.34
7	PB6	Cum	1	3.25	0.23	0.45	0.34
8	PB7	Cum	1	3.25	0.15	0.45	0.22
9	PB8	Cum	3	12.86	0.23	0.45	3.99

Sr. No.	Description	Unit	No's	L	B	H	Qty.
10	PB9-Long	Cum	3	10.5	0.23	0.45	3.26
11	PB9-Short	Cum	2	6.62	0.23	0.45	1.37
	Column RCC (Footing to Plinth Level)	Cum					
	C6	Cum	2	0.30	0.60	2.50	0.90
	C7	Cum	15	0.40	0.40	2.60	6.24
	Lift Wall	Cum	1	4.80	0.23	2.60	2.87
	Main Gate Plinth Beam						
	PB1	Cum	1	17.00	0.23	0.45	1.76
	PB1-Short	Cum	1	0.60	0.23	0.45	0.06
	PB3	Cum	2	1.13	0.23	0.45	0.23
	Security Cabin Column						
	C5,C10,C6,C11	Cum	4	0.40	0.23	6.00	2.21
	C7,C8,C9	Cum	3	0.40	0.23	6.00	1.66
	C1,C2	Cum	2	0.40	0.23	6.00	1.10
	C3,C4,C12,C13	Cum	4	0.40	0.23	6.00	2.21
						Total	31.82
	Ground Floor						
	First Floor Beam						
1	B1	Cum	1	12.76	0.23	0.45	1.32
2	B2	Cum	1	10.6	0.23	0.45	1.10
3	B3	Cum	1	2	0.23	0.45	0.21
4	B4-Long	Cum	1	3.2	0.23	0.45	0.33
5	B4-Short	Cum	1	1	0.23	0.45	0.10
6	B5	Cum	1	3.25	0.23	0.45	0.34
7	B6	Cum	1	3.25	0.23	0.45	0.34
8	B7	Cum	1	3.25	0.15	0.45	0.22
	Column RCC (Plinth Level First Floor Level)						
	C6	Cum	2	0.30	0.60	3.60	1.30
	C7	Cum	15	0.40	0.40	3.60	8.64
	Lift Wall	Cum	1	4.8	0.23	3.60	3.97
	Security Cabin Roof Beam						
	Column RCC (Plinth Level First Floor Level)	Cum	4	0.23	0.45	3.50	1.45
	TB1	Cum	2	1.13	0.23	0.45	0.23
	TB2	Cum	2	0.57	0.23	0.45	0.12
	Slab	Cum	1	1.93	1.20	0.13	0.29
						Total	19.95
	First Floor						
	Second Floor Beam						
1	B1	Cum	1	12.76	0.23	0.45	1.32
2	B2A	Cum	1	10.6	0.3	0.6	1.91
3	B3	Cum	1	2	0.23	0.45	0.21
4	B4-Long	Cum	1	3.2	0.23	0.45	0.33
5	B4-Short	Cum	1	1	0.23	0.45	0.10
6	B5	Cum	1	3.25	0.23	0.45	0.34
7	B6	Cum	1	3.25	0.23	0.45	0.34
8	B7	Cum	1	3.25	0.15	0.45	0.22
9	B8	Cum	3	12.86	0.3	0.45	5.21
10	B9	Cum	5	10.5	0.3	0.45	7.09
11	B10	Cum	7	10.5	0.23	0.45	7.61
	Column RCC (First Floor to Second Floor)						
	C6	Cum	2	0.3	0.6	3.6	1.30
	C7	Cum	15	0.4	0.4	3.6	8.64
	Lift Wall	Cum	1	4.8	0.23	3.6	3.97
	RCC Slab-S3	Cum	1	1.5	3.25	0.125	0.61
	RCC Slab-S2	Cum	1	4.87	3.245	0.15	2.37
	RCC Slab-S2	Cum	1	4.2	3.245	0.15	2.04
						Total	43.60
	Second Floor						
	Terrace Beam + Tie Beam at 3.6m Level for Terrace Column						
1	TB1	Cum	2	13.2	0.25	0.60	3.96
2	TB2	Cum	2	13.2	0.3	0.60	4.75
3	TB2-Short	Cum	6	6.23	0.3	0.60	6.73
4	TB3	Cum	4	6.15	0.3	0.75	5.54
5	TB4	Cum	2	6.15	0.23	0.60	1.70
6	TB5	Cum	2	13.2	0.3	0.75	5.94

Sr. No.	Description	Unit	No's	L	B	H	Qty.
7	TB5	Cum	2	1	0.3	0.75	0.45
8	TB6	Cum	2	13.2	0.3	0.75	5.94
9	TB7	Cum	2	19.25	0.23	0.60	5.31
10	TB8	Cum	2	6.5	0.3	0.60	2.34
11	TB8	Cum	2	19.3	0.3	0.60	6.95
12	TB8	Cum	2	12.4	0.3	0.60	4.46
13	TB9	Cum	2	12.4	0.3	0.75	5.58
14	TB10	Cum	2	3	0.23	0.45	0.62
15	TB11	Cum	2	3.3	0.15	0.45	0.45
16	TB12	Cum	4	15.9	0.23	0.45	6.58
	Staire Case Flight	Cum	2	3.5	1.5	0.15	1.58
	Steps (22 nos. X 0.5)	Cum	11	1.5	0.3	0.165	0.82
	Landing	Cum	2	3	1.5	0.15	1.35
	Column RCC (Second Floor to Third Floor)						
	C6	Cum	2	0.3	0.6	3.6	1.30
	Column	Cum	24	0.38	0.23	3.6	7.55
	Lift Wall	Cum	1	4.8	0.23	3.6	3.97
	Chajja	Cum	1	15.4	0.9	0.1	1.39
		Cum		13.2	0.9	0.1	1.19
	RCC Slab-S2	Cum	1	1.5	3.25	0.125	0.61
	RCC Slab-S3	Cum	1	4.87	3.245	0.15	2.37
	RCC Slab-S3	Cum	1	4.2	3.245	0.15	2.04
						Total	91.46
	Third Floor						
	Terrace Slab	Cum	1	13.36	20	0.15	40.08
	C6	Cum	2	0.37	0.15	6.5	0.72
	Column	Cum	24	0.38	0.23	6.5	13.63
	Lift Wall	Cum	6	6.23	0.3	0.6	6.73
							61.16
30	Providing and laying M25 grade RCC jacketing work around the existing column including chipping of existing column,applying epoxy as a bonding agent between old concrete and new concrete and required shuttering work,curing, including cost of all material and labour etc. Complete.(Note:Reinforcementsteel will be pais separetaly) (RA Attached)						
	Foundation to Plinth Lvl						
	Jackating of Column						
	Grid C,E and 1	Cum	2	0.58	0.43	2.60	1.30
	Existing Column Ded.	Cum	-2	0.30	0.15	2.60	-0.23
	Grid A and 2	Cum	1	0.65	0.43	2.60	0.73
		Cum	-1	0.37	0.15	2.60	-0.14
	Grid F and 1,3	Cum	2	0.65	0.43	2.60	1.45
		Cum	-2	0.37	0.15	2.60	-0.29
	Grid E and 5	Cum	1	0.58	0.43	2.60	0.65
		Cum	-1	0.30	0.15	2.60	-0.12
	Plinth Lvl to First Floor Slab						
	Jackating of Column						
	Grid C,E and 1	Cum	2	0.58	0.43	3.60	1.80
	Existing Column Ded.	Cum	-2	0.30	0.15	3.60	-0.32
	Grid A and 2	Cum	1	0.65	0.43	3.60	1.01
	Existing Column Ded.	Cum	-1	0.37	0.15	3.60	-0.20
	Grid F and 1,3	Cum	2	0.65	0.43	3.60	2.01
	Existing Column Ded.	Cum	-2	0.37	0.15	3.60	-0.40
	Grid E and 5	Cum	1	0.58	0.43	3.60	0.90
	Existing Column Ded.	Cum	-1	0.30	0.15	3.60	-0.16
	First Floor to Second Floor Slab						
	Jackating of Column						
	Grid C,E and 1	Cum	2	0.58	0.43	3.60	1.80
	Existing Column Ded.	Cum	-2	0.30	0.15	3.60	-0.32
	Grid A and 2	Cum	1	0.65	0.43	3.60	1.01
		Cum	-1	0.37	0.15	3.60	-0.20
	Grid F and 1,3	Cum	2	0.65	0.43	3.60	2.01
		Cum	-2	0.37	0.15	3.60	-0.40
	Grid E and 5	Cum	1	0.58	0.43	3.60	0.90
		Cum	-1	0.30	0.15	3.60	-0.16
	Add 20% Extra Qty.						2.52

Sr. No.	Description	Unit	No's	L	B	H	Qty.
		Cum				Total	15.11
31	KSRB 4-6.1 : Providing and removing centering, shuttering, strutting, propping etc., and removal of form work for foundations, footings, bases of columns for mass concrete including cost of all materials, labour complete as per specifications. Specification No. KBS 4.6.2 (KPWD 18-19,Sl.No.4.28,Pg No.16)						
	Footing			Perimeter			
	F1	Sqm	2	6.0		0.50	6.00
	F2	Sqm	15	4.8		0.40	28.80
	Lift Footing	Sqm	1	14.4		0.40	5.76
	Main Gate-Foundation						
	C3,C4,C12,C13	Sqm	4	4.4		0.40	7.04
	Combined Footing-C5 and C6	Sqm	2	5.1		0.40	4.08
	Combined Footing-C7,C8,C9	Sqm	1	7.5		0.40	3.00
	Combined Footing-C1,C2	Sqm	1	6.0		0.40	2.40
	SWD-Base	Sqm	2	230.0		0.10	46.00
	SWD-Wall	Sqm	4	230.0		1.00	920.00
	SWD-Slab	Sqm	1	230		0.9	207.00
		Sqm				Total	1230.08
32	KSRB 4-6.7 :Providing and removing centering, shuttering, strutting, propping etc., and removal of form work for sides and soffits of beams, beam haunchings, cantilever girders, bressumers and lintels not exceeding 1m in depth including cost of all materials, labour complete as per specifications. Specification No. KBS 4.6.2 (KPWD 18-19,Sl.No.4.34,Pg No.17)						
	Plinth Beam						
	Beam-Sides * 2 + Bottom						
1	PB1	Sqm	1	12.76	1.13		14.42
2	PB2	Sqm	1	10.6	1.13		11.98
3	PB3	Sqm	1	2	1.13		2.26
4	PB4-Long	Sqm	1	3.2	1.13		3.62
5	PB4-Short	Sqm	1	1	1.13		1.13
6	PB5	Sqm	1	3.25	1.13		3.67
7	PB6	Sqm	1	3.25	1.13		3.67
8	PB7	Sqm	1	3.25	1.05		3.41
9	PB8	Sqm	3	12.86	1.13		43.60
10	PB9-Long	Sqm	3	10.5	1.13		35.60
11	PB9-Short	Sqm	2	6.62	1.13		14.96
		Sqm				Total	138.31
	First Floor Beam						
1	B1	Sqm	1	12.76	1.13		14.42
2	B2	Sqm	1	10.6	1.13		11.98
3	B3	Sqm	1	2	1.13		2.26
4	B4-Long	Sqm	1	3.2	1.13		3.62
5	B4-Short	Sqm	1	1	1.13		1.13
6	B5	Sqm	1	3.25	1.13		3.67
7	B6	Sqm	1	3.25	1.13		3.67
8	B7	Sqm	1	3.25	1.05		3.41
		Sqm				Total	44.16
	Second Floor Beam						
1	B1	Sqm	1	12.76	1.13		14.42
2	B2A	Sqm	1	10.6	1.50		15.90
3	B3	Sqm	1	2	1.13		2.26
4	B4-Long	Sqm	1	3.2	1.13		3.62
5	B4-Short	Sqm	1	1	1.13		1.13
6	B5	Sqm	1	3.25	1.13		3.67
7	B6	Sqm	1	3.25	1.13		3.67
8	B7	Sqm	1	3.25	1.05		3.41
9	B8	Sqm	3	12.86	1.20		46.30
10	B9	Sqm	5	10.5	1.20		63.00
11	B10	Sqm	7	10.5	1.13		83.06

Sr. No.	Description	Unit	No's	L	B	H	Qty.
		Sqm				Total	240.43
	Terrace Beam						
	Terrace Beam						
1	TB1	Sqm	2	13.2	1.45		38.28
2	TB2	Sqm	2	13.2	1.50		39.60
3	TB2-Short	Sqm	6	6.23	1.50		56.07
4	TB3	Sqm	4	6.15	1.80		44.28
5	TB4	Sqm	2	6.15	1.43		17.59
6	TB5	Sqm	2	13.2	1.80		47.52
7	TB5	Sqm	2	1	1.80		3.60
8	TB6	Sqm	2	13.2	1.80		47.52
9	TB7	Sqm	2	19.25	1.43		55.06
10	TB8	Sqm	2	6.5	1.50		19.50
11	TB8	Sqm	2	19.3	1.50		57.90
12	TB8	Sqm	2	12.4	1.50		37.20
13	TB9	Sqm	2	12.4	1.80		44.64
14	TB10	Sqm	2	3	1.13		6.78
15	TB11	Sqm	2	3.3	1.05		6.93
16	TB12	Sqm	4	15.9	1.13		71.87
		Sqm				Total	594.33
33	KSRB 4-6.5 : Providing and removing centering, shuttering, strutting, propping etc., and removal of form work for columns, pillars, post and struts, square I rectangular/ polygon in plan including cost of all materials, labour complete as per specifications. Specification No. KBS 4.6.2 (KPWD 18-19,Sl.No.4.32,Pg.No.16)						
	Column RCC (Footing to Plinth Level)						
	C6	Sqm	2	1.8		2.50	9.00
	C7	Sqm	15	1.6		2.60	62.40
	Jackating of Column	Sqm					
	Grid C,E and 1	Sqm	2	2.02		2.60	10.50
	Grid A and 2	Sqm	1	2.16		2.60	5.62
	Grid F and 1,3	Sqm	2	2.16		2.60	11.23
	Grid E and 5	Sqm	1	2.02		2.60	5.25
		Sqm					
	Column RCC (Plinth Level First Floor Level)						
	C6	Sqm	2	1.8		3.60	12.96
	C7	Sqm	15	1.6		3.60	86.40
	Security Cabin Column	Sqm					
	C5,C10,C6,C11	Sqm	4	1.26		6	30.24
	C7,C8,C9	Sqm	3	1.26		6	22.68
	C1,C2	Sqm	2	1.26		6	15.12
	C3,C4,C12,C13	Sqm	4	1.26		6	30.24
	Jackating of Column	Sqm					
	Grid C,E and 1	Sqm	2	2.02		3.60	
	Grid A and 2	Sqm	1	2.16		3.60	
	Grid F and 1,3	Sqm	2	2.16		3.60	
	Grid E and 5	Sqm	1	2.02		3.60	
		Sqm				Total	301.64
	Column RCC (First Floor to Second Floor)						
	C6	Sqm	2	1.8		3.6	12.96
	C7	Sqm	15	1.6		3.6	86.40
	Jackating of Column						0.00
	Grid C,E and 1	Sqm	2	2.02		3.60	14.54
	Grid A and 2	Sqm	1	2.16		3.60	7.78
	Grid F and 1,3	Sqm	2	2.16		3.60	15.55
	Grid E and 5	Sqm	1	2.02		3.60	7.27
	Other Column	Sqm	24	1.22		3.60	105.41
		Sqm				Total	249.91
	Column RCC (Second Floor to Third Floor)						
	C6	Sqm	2	1.8		3.6	12.96
			24	1.22		3.6	105.41
		Sqm				Total	118.37

Sr. No.	Description	Unit	No's	L	B	H	Qty.
34	KSRB 4-6.2 : Providing and removing centering, shuttering, strutting, propping etc., and removal of formwork for suspended floors, landings, balconies and likes, thickness upto 200 mm including cost of all materials, labour complete as per specifications. Specifications No. KBS 4.6.2. do- - 0 to 5 mts (KPWD 18-19,Sl.No.4.29.2,Pg.No.16)						
	First Floor slab						
	Slab RCC	Sqm	1	13.66	3.70		50.54
	Security Cabin	Sqm	1	1.93	1.20		2.31
						Total	52.85
	Second Level Slab						
	Slab RCC	Sqm	1	13.66	3.70		50.54
							50.54
	Terrace Level Slab						
	Slab RCC	Sqm	1	19.00	14.00		266.00
	Store Room	Sqm	1	3.4	5.03		17.10
	Lift Room	Sqm	1	5.3	2.80		14.84
						Total	297.94
35	KSRB 4-6.11 :Providing and removing centering, shuttering, strutting, propping etc., and removal of form work for Stairs (excluding landing) except spiral staircase including cost of all materials, labour complete as per specificaiton. Specification No. KBS 4.6.2 (KPWD 18-19,Sl.No.4.38,Pg.No.17)						
	Staire Case-Ground Floor to First Floor						
	Flight	Sqm	2	3.45	1.5		10.35
	Riser	Sqm	22	3.45	0.165		12.52
						Total	22.87
36	KSRB 4-6.10 :Providing and removing centering, shuttering, strutting, propping etc, and removal of form work for chajja, corbels etc., including edges including cost of all materials, labour complete as per specifications. Specification No. KBS 4.6.2 (KPWD 18-19,Sl.No.4.37,Pg.No.17)						
	Second Floor						
	Chajja						
	Long Side-Bottom	Sqm	2	15.4	0.9		27.72
	Short Side-Bottom	Sqm	2	13.2	0.9		23.76
	Long Side-Sides	Sqm	2	15.4	0.15		4.62
	Short Side-Bottom	Sqm	2	13.2	0.15		3.96
		Sqm				Total	60.06
37	KSRB 4-6.4 : Providing and removing centering, shuttering, strutting, propping etc., and removal of form work for vertical surface such as walls at any thickness, including attached pilasters, buttresses, plinth cills and string courses cost of all materials, labour complete as per specifications. Specification No. KBS 4.6.2						
	Ground Floor	Sqm	2.00	7.60		3.6	54.72
	First Floor	Sqm	2.00	7.60		3.6	54.72
	Second Floor	Sqm	2.00	7.60		3.6	54.72
	Third Floor	Sqm	2.00	7.60		3.6	54.72
		Sqm				Total	218.88

Sr. No.	Description	Unit	No's	L	B	H	Qty.
38	KSRB 4.9.2 : Providing T.M.T steel reinforcement for R.C.C work including straightening, cutting, bending, hooking, placing in position, lapping and l or welding wherever required, tying with binding wire and anchoring to the adjoining members wherever necessary complete as per design (laps, hooks and wastage shall not be measured and paid) cost of materials, labour, HOM complete as per specifications. Specification No. KBS 4.6.3 TMT bars Fe 500 (KPWD 18-19,Sl.No.4.46.2,Pg No.18)		Concret e in Cum	Kg/Cum	Kg		MT
	Foundation and Ground Floor						
	Footing		176.53	100	17652.52		17.65
	Beam		18.93	100	1893.213		1.89
	Column		33.67	120	4040.309		4.04
	Lift Wall		6.84	100	684.48		0.68
	Slab		0.29	120	34.65		0.03
						Total	24.31
	First Floor						
	Beam		24.67	100	2466.554		2.47
	Column		14.56	120	1747.526		1.75
	Lift Wall		3.97	100	397.44		0.40
	Slab		5.02	120	602.9037		0.60
						Total	5.21
	Second Floor						
	Beam		67.30	100	6729.69		6.73
	Column		8.85	120	1061.683		1.06
	Lift Wall		3.97	100	397.44		0.40
	Slab		7.60	100	759.8198		0.76
	Staire Case		3.74	100	374.175		0.37
						Total	9.32
	Terrace Floor						
	Slab		40.08	100.00	4008		4.01
	Column		14.36	120	1722.708		1.72
	Lift Wall		6.73	100	672.84		0.67
			437.11	0.00		Total	6.40
39	Providing fusion bonded epoxy coating not less than 175 microns thickness and upto 300 microns to reinforcement of all diameters as per IS: 13620-1993 including testing of coating at plant The rate is inclusive of cost on account of careful handling, PVC coated binding wire instead of GI Binding wire, touch up material supplied by coating agency, repair work, loading, unloading and straightening of bent rods etc., complete as per specification and as directed by the Engineer in charge. do For 10mm to 16mm dia bars (KPWD 18-19,Sl.No.7.21.1,Pg.No.40)	Mt	1.00	45.25			45.25
40	Structural steel work riveted, bolted or welded in built up sections, trusses and framed work, including cutting, hoisting, fixing in position and applying, priming coat of approved steel primer all complete. (CPWD 2018, Sl.No.10.2, Pg.No.183)						
	Roof Truss	Sqm	1.00	14.00	4.00		56.00
				Sqm	Kg/Sqm		
	Structural Steel @ 40kg/Sqm	Kg	1.00	56.00	40.00		2240.00
	Qty in MT	MT					2.24
41	Refixing the existing Structural steel (Roof Truss) work riveted, bolted or welded in built up sections, trusses and framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer all complete (Rate Analysis)						
	Total Roof Area	Sqm	1.00	14.00	13.00		182.00
				Sqm	kg/sqm		
	Assume Steel per Sqm @ 40kg/Sqm	Kg		182.00	40.00		7280.00

Sr. No.	Description	Unit	No's	L	B	H	Qty.
42	Fixing corrugated G.S. sheet roofing including vertical / curved surface fixed with polymer coated J or L hooks, bolts and nuts 8 mm diameter with bitumen and G.I. limpet washers or with G.I. limpet washers filled with white lead, including a coat of approved steel primer and two coats of approved paint on overlapping of sheets complete (up to any pitch in horizontal/ vertical or curved surfaces), excluding the cost of purlins, rafters and trusses and including cutting to size and shape wherever required. (Rate Analysis)	Sqm	1.00	18.00	15.00		270.00
43	Providing corrugated G.S. sheet roofing including vertical / curved surface fixed with polymer coated J or L hooks, bolts and nuts 8 mm diameter with bitumen and G.I. limpet washers or with G.I. limpet washers filled with white lead, including a coat of approved steel primer and two coats of approved paint on overlapping of sheets complete (up to any pitch in horizontal/ vertical or curved surfaces), excluding the cost of purlins, rafters and trusses and including cutting to size and shape wherever required. 1.00 mm thick with zinc coating not less than 275 gm/m ² (CPWD)						
	Sheet	Sqm	1.00	16.00	5.50		88.00
44	KSRB 14.6: Providing and laying heavy duty cobble stones interlock pavers, using cement and course sand for manufacture of blocks of approved size, shape and colour with a minimum compressive strength of 281 kg per sqm over 50mm thick sand bed (average thickness) and compacting with plate vibrator having 3 tons compaction force thereby forcing part of sand underneath to come up in between JOints, final compaction of paver surface JOints into its final level, including cost of materials, labour and HOM complete as per specifications. Specification No. KBS KSRB 14.6-1 : do- heavy duty cobble stones 60mm thick (KPWD 18-19,Sl.No.14.6,Pg.No.103)						
	Hardscape Area	Sqm	1	986			986.00
	Area under paragola	Sqm	1	13.2	7		92.40
						Total	1078.40
45	Providing and laying eco-loc permeable pavers,80mm or equivalent block making machine with strong vibratory compaction, of approved size, design & shape, laid in required colour and pattern over and including 50mm thick compacted bed of coarse sand, filling the joints with line sand etc. all complete as per the direction of Engineer-in-charge.						
	Four Wheeler Parking Area	Sqm	1	996			996.00
	Two Wheeler Parking Area	Sqm	1	177			177.00
		Sqm					1173.00
46	Providing and fixing 15cm wide,45cm overall semi circular plain GS Sheet gutter with iron brackets 40 x 3mm size,bolts,nuts and washers etc, including making necessary connections with rain water pipes complete, 0.8mm thick with zinc coating not less than 275gm/m ² (CPWD 2018,Sl.No.12.7.1,Pg.No.211)						
	Long Side	Rm	2	20			40.00
		Rm				Total	40.00

Sr. No.	Description	Unit	No's	L	B	H	Qty.
47	Providing and fixing unplasticised PVC pipes with working pressure 10 kg/sq.cm with pipe fittings, clips, making good the floor, including cost of all materials, labour charges, HOM and testing complete as per specifications. do- with 160mm outer dia KPWD 18-19,Sl.No.11.56.4,Pg.No.77						
	Downtake Pipe for Rain Water for Lower Roof	Rm	11	12.5			137.50
		Rm				Total	137.50
48	Providing and constructing Laterite size stone masonry including cost and conveyance of all materials curing etc complete as per specification. I.S. 3620/1979 having compressive strength not less then 3.5 N/mm2 for saturated dry samples. For basement in CM 1:6 (Cement 45 kgs/M3) (KPWD 2018-19,42.5.1)						
	Masonry Below Plinth Lvl.						
	230 mm Thk. Wall						
	Long Wall	Cum	2	20	0.23	0.5	4.6
	Short Wall	Cum	2	14	0.23	0.5	3.22
	Ramp	Cum	1	74	0.23	0.5	8.51
	Compound Wall	Cum	1	150	0.23	3	103.5
		Cum					119.83
	Ground Floor						
	Security Cabin-Long Wall	Cum	2	1.8	0.23	3.6	2.98
	Security Cabin-Short Wall	Cum	2	1.2	0.23	3.6	1.99
	Door Deduction	Cum	-1	1	0.23	2.1	-0.48
	Window Deduction	Cum	-1	1.2	0.23	1.2	-0.33
	External Wall	Cum	1	25	0.23	3.6	20.7
	Compound Wall	Cum	1	150	0.23	3	103.5
	Gate Deduction	Cum	-1	3	0.23	3	-2.07
	Gate Deduction	Cum	-1	1.5	0.23	3	-1.04
							125.25
	First Floor						
	Provisional Qty	Cum	1	5	0.23	3.6	4.14
	For super structure in CM 1:6 (Cement 45 kgs/M3)- Second Floor (KPWD 2018-19,42.5.3)						
	Long Wall	Cum	2.00	20.00	0.23	3.60	33.12
	Short Wall	Cum	2.00	14.00	0.23	3.60	23.18
	External Wall	Cum	1	25	0.23	3.60	20.7
	Window Ded.(1.5m Wide)	Cum	-7.00	1.50	0.23	1.20	-2.90
	Window Ded.(2.0m Wide)	Cum	-4.00	2.00	0.23	1.20	-2.21
	Ventilators	Cum	-6.00	0.60	0.23	0.90	-0.75
							71.15
49	Providing and constructing non load bearing wall with Light Weight Concrete (Autoclaved aerated concrete) Blocks confirming to IS:2185 (part-3) 1984 and IS 6441-1972 of compressive strength of 3.0N/sq mm with a thin layer of polymer based jointing solvent for super structure with necessary scaffolding, curing including cost of all materials, labour, lead & lift etc, complete as per specifications. with 600x200x150mm size Blocks (KPWD 18-19,Sl.No.6.32.2,Pg.No.31)						
	Ground Floor						
	Toilet Partition wall	Cum	1	3.245	0.15	3.45	1.68
	Toilet -Pantry Partition	Cum	2	1.93	0.15	3.45	2.00
	Gents-Ladies toilet partition wall	Cum	1	2.08	0.15	3.45	1.08
	Toilet Main wall	Cum	1	4.99	0.15	3.45	2.58
	Door	Cum	-3	0.75	0.15	2.1	-0.71
	Store room wall	Cum	1	3.075	0.15	3.45	1.59
	Lift Brickwork	Cum	1	2	0.15	3.45	1.04

Sr. No.	Description	Unit	No's	L	B	H	Qty.
	Lift Door Deduction	Cum	-1	1	0.15	2.1	-0.32
							8.94
	First Floor						
	Toilet Internal Wall	Cum	1	3.243	0.15	3.45	1.68
	Toilet Partition Wall	Cum	1	1.6	0.15	3.45	0.83
	Plan file store room Shortwall	Cum	1	6.01	0.15	3.45	3.11
	Counter Longwall	Cum	1	6.16	0.15	3.45	3.19
	Counter Shortwall	Cum	1	5.03	0.15	3.45	2.6
	Gents toilet wall	Cum	1	1.93	0.15	3.45	1
	Gents-Ladies Partition wall	Cum	1	2.08	0.15	3.45	1.08
	Gents Ladies Entry wall	Cum	1	3.38	0.15	3.45	1.75
	Doors	Cum	-2	0.75	0.15	2.1	-0.47
	Ladies toilet- Pantry Partition wall	Cum	1	2.7	0.15	3.45	1.4
	Pantry-Store Partition	Cum	1	3.305	0.15	3.45	1.71
	Store room Shortwall	Cum	1	1.309	0.15	3.45	0.68
	Lift Brickwork	Cum	1	2	0.15	3.45	1.04
	Lift Door Deduction	Cum	-1	1	0.15	2.1	-0.32
							19.28
	Second Floor						
	Store room partition	Cum	1	1.99	0.15	3.45	1.03
	Gents toilet- store room partition	Cum	1	1.93	0.15	3.45	1.00
	Ladies- Gents Toilet Partition	Cum	1	2.08	0.15	3.45	1.08
	Ladies- Pantry Partition	Cum	1	2.69	0.15	3.45	1.39
	Pantry-Store Partition	Cum	1	3.305	0.15	3.45	1.71
	Toilet combined main entry wall	Cum	1	3.38	0.15	3.45	1.75
	Doors	Cum	-2	0.75	0.15	2.1	-0.47
	Store room shortwall	Cum	1	1.309	0.15	3.45	0.68
	Drinking water shortwall	Cum	1	0.75	0.15	3.45	0.39
	Windows	Cum	-2	1	0.15	1.2	-0.36
	Toilet-Storage Room common wall	Cum	1	8.39	0.15	3.45	4.34
	Doors	Cum	2	0.75	0.15	2.1	0.47
	Toilet Partition	Cum	1	1.6	0.15	3.45	0.83
	Lift Brickwork	Cum	1	2	0.15	3.45	1.04
	Lift Door Deduction	Cum	-1	1	0.15	2.1	-0.32
							14.56
	Third Floor						
	Drinking water facility wall	Cum	1	3.0551	0.15	3	1.37
	Staircase frontwall	Cum	1	3	0.15	3	1.35
	Door	Cum	1	1	0.15	2.1	0.32
	Lift Brickwork	Cum	1	2	0.15	3	0.9
	Lift Door Deduction	Cum	-1	1	0.15	2.1	-0.32
		Cum				Total	3.62
50	Providing and constructing non load bearing wall with Light Weight Concrete (Autoclaved aerated concrete) Blocks conforming to IS:2185 (part-3) 1984 and IS 6441-1972 of compressive strength of 3.0N/sq mm with a thin layer of polymer based jointing solvent for super structure with necessary scaffolding, curing including cost of all materials, labour, lead & lift etc, complete as per specifications. with 600x200x230mm size Blocks (KPWD 18-19, Sl.No.6.32.4, Pg.No.31)						
	Ground Floor						
	Toilet External wall	Cum	1	3.245	0.23	3.45	2.57
	Doors	Cum	-2	0.75	0.23	2.1	-0.72
	External Wall -1	Cum	1	13.21	0.23	3.45	10.48
	Door	Cum	-1	1.8	0.23	2.1	-0.87
	Service Duct	Cum	2	1.013	0.23	3.45	1.61
							13.07
	First Floor						
	External Main wall	Cum	1	13.21	0.23	3.45	10.48
	Toilet External Wall	Cum	1	3.243	0.23	3.45	2.57
	Windows	Cum	-2	0.6	0.23	1.2	-0.33
	Service Duct	Cum	2	1.021	0.23	3.45	1.62
	Plan file store room longwall	Cum	1	6.22	0.23	3.45	4.94
	Storage wall	Cum	1	3.07	0.23	3.45	2.44
							21.72
	Second Floor						
	External wall west side	Cum	1	20	0.23	3.45	15.87

Sr. No.	Description	Unit	No's	L	B	H	Qty.
	Small Windows	Cum	-2	0.6	0.23	1.2	-0.33
	Large Windows	Cum	-5	1.5	0.23	1.2	-2.07
	External wall east side	Cum	1	17.08	0.23	3.45	13.55
	Large Windows	Cum	-2	2	0.23	1.2	-1.1
	External wall north side	Cum	1	13.2	0.23	3.45	10.47
	Small Windows	Cum	-4	0.6	0.23	1.2	-0.66
	Large Windows	Cum	-2	1.5	0.23	1.2	-0.83
	External wall south side	Cum	1	10.74	0.23	3.45	8.52
	Large Windows	Cum	-2	2	0.23	1.2	-1.1
	Staircase Walls	Cum	2	4.355	0.23	3.45	6.91
	Passage wall	Cum	1	3	0.23	3.45	2.38
	Service Duct walls	Cum	2	1.021	0.23	3.45	1.62
	Drinking water longwall	Cum	1	1.399	0.23	3.45	1.11
	Partition wall	Cum	1	3.24	0.23	3.45	2.57
	Storage room shortwall	Cum	1	1.32	0.23	3.45	1.05
	Toilet sidewall	Cum	1	2.16	0.23	3.45	1.71
							59.67
	Third Floor						
	External wall North side	Cum	1	13.2	0.23	1.1	3.34
	External wall South side	Cum	1	10.968	0.23	1.1	2.77
	External wall West side	Cum	1	19.54	0.23	1.1	4.94
	External wall East side	Cum	1	17.08	0.23	1.1	4.32
	Storage Longwall	Cum	1	4.27	0.23	3	2.95
	Storage Shortwall	Cum	1	3.03	0.23	3	2.09
	Wall beside Staircase	Cum	1	5.93	0.23	3	4.09
	Wall beside Staircase	Cum	1	4.35	0.23	3	3.00
	Lift Longwall	Cum	1	4.92	0.23	3	3.39
	Lift Shortwall	Cum	1	2.45	0.23	3	1.69
		Cum				Total	32.58
51	KSRB15-3 : Providing 15mm thick cement plaster in single coat with cement mortar to brick masonry including rounding off corners wherever required smooth rendering, Providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications. do- cement mortar 1:4 (KPWD 18-19,Sl.No.15.13,Pg.No.115)						
	Ground Floor						
	Document Submission & Lobby						
1	Longwall-1	Sqm	1	12.76		3.45	44.02
	Door	Sqm	-2	1.1		2.1	-4.62
2	Shortwall-1	Sqm	2	3.245		3.45	22.39
	Lift Door	Sqm	-1	1		2.1	-2.1
3	Longwall-2	Sqm	1	8.817		3.45	30.42
	Door	Sqm	-2	1.1		2.1	-4.62
4	Shortwall-2	Sqm	1	4.267		3.45	14.72
	Door	Sqm	-1	1.8		2.1	-3.78
	Security Cabin						
	Long Wall	Sqm	2	1.5		3	9
	Short wall	Sqm	2	2		3	12
		Sqm				Total	117.43
	First Floor						
	Waiting Area & Lift Lobby						
1	Longwall-1	Sqm	2	9.369		3.45	64.65
	Window	Sqm	-2	2		1.2	-4.8
	Door	Sqm	-1	1.8		2.1	-3.78
2	Shortwall	Sqm	2	3.242		3.45	22.37
	Door	Sqm	-2	0.75		2.1	-3.15
	Lift Door	Sqm	-1	1		2.1	-2.1
3	Longwall-2	Sqm	1	12.75		3.45	43.99
	Door	Sqm	-1	1.8		2.1	-3.78
		Sqm				Total	113.4
	Second Floor						
	Store Room-1						
1	Longwall-1	Sqm	1	3.185		3.45	10.99
	Window	Sqm	-1	1.5		1.2	-1.8
2	Longwall-2	Sqm	1	3.075		3.45	10.61
	Window	Sqm	-1	1.5		1.2	-1.8
3	Shortwall-1	Sqm	1	1.99		3.45	6.87

Sr. No.	Description	Unit	No's	L	B	H	Qty.
	Store room -2						
1	Longwall-1	Sqm	1	3.185		3.45	10.99
	Window	Sqm	-1	1.5		1.2	-1.8
2	Shortwall-1	Sqm	1	1.99		3.45	6.87
3	Shortwall-2	Sqm	1	1.93		3.45	6.66
	Pantry						
1	Shortwall-1	Sqm	1	1.459		3.45	5.03
	Window	Sqm	-1	0.6		1.2	-0.72
2	Longwall-1	Sqm	1	3.305		3.45	11.4
3	Longwall-2	Sqm	1	3.305		3.45	11.4
	Store						
1	Shortwall-1	Sqm	1	1.459		3.45	5.03
2	Window	Sqm	-1	0.6		1.2	-0.72
3	Shortwall-2	Sqm	1	1.309		3.45	4.52
4	Longwall-1	Sqm	1	3.305		3.45	11.4
5	Longwall-2	Sqm	1	3.075		3.45	10.61
	Office						
1	External wall -westside	Sqm	1	12.69		3.45	43.78
	Windows	Sqm	-4	1.5		1.2	-7.2
2	Longwall-1	Sqm	1	3.45		3.45	11.9
3	Shortwall-1	Sqm	1	1.32		3.45	4.55
4	Shortwall-2	Sqm	1	1.499		3.45	5.17
	Storage						
1	Longwall-1	Sqm	1	5.28		3.45	18.22
2	Shortwall-1	Sqm	1	3.24		3.45	11.18
3	Shortwall-2	Sqm	1	3.649		3.45	12.59
	Doors	Sqm	-2	0.75		2.1	-3.15
4	Longwall-2	Sqm	1	1.54		3.45	5.31
5	Shortwall-3	Sqm	1	0.75		3.45	2.59
	Drinking water wall						
1	Longwall-1	Sqm	1	1.399		3.45	4.83
2	Shortwall-1	Sqm	1	0.75		3.45	2.59
	Pantry Passage walls						
1	Longwall	Sqm	1	1.464		3.45	5.05
	Door	Sqm	-1	0.75		2.1	-1.58
1	External wall - east side	Sqm	1	12.69		3.45	43.78
	Window	Sqm	-4	2		1.2	-9.6
	Staircase passage walls						
1	Longwall-1	Sqm	2	4.504		3.45	31.08
2	Shortwall-1	Sqm	1	3		3.45	10.35
	Lift Passage						
1	Longwall-1	Sqm	1	4.05		3.45	13.97
2	Longwall-2	Sqm	1	4.44		3.45	15.32
3	Shortwall-1	Sqm	1	2.27		3.45	7.83
4	Shortwall-2	Sqm	1	3.24		3.45	11.18
		Sqm				Total	345.28
	Terrace Floor						
	Storage room						
1	Longwall	Sqm	2	4.5	3		27
2	Shortwall	Sqm	2	2.805	3		16.83
	Door	Sqm	-1	1	2.1		-2.1
							0
	Staircase						0
1	Longwall-1	Sqm	1	6.61	3		19.82
2	Longwall-2	Sqm	1	4.50	3		13.51
3	Shortwall	Sqm	2	3	3		18
	Door	Sqm	-1	1	2.1		-2.1
	Window	Sqm	-1	2	1.2		-2.4
		Sqm				Total	88.56

Sr. No.	Description	Unit	No's	L	B	H	Qty.
52	KSRB15-5 : Providing rough cement plastering 15mm thick in single coat with cement mortar to brick masonry for base of dadoing works with sand of approved quality, providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications. do - cement mortar 1:6 (KPWD 18-19,Sl.No.15.31,Pg.No.117)						
	Ground Floor						
	Toilet (2 Nos.)						
	Long Wall	Sqm	4	2.00		3.6	28.8
	Short Wall	Sqm	4	1.60		3.6	23.04
	Door Deduction	Sqm	-2	0.75		2.1	-3.15
	Ventilator Deduction	Sqm	-2	0.60		0.9	-1.08
	Gents Toilet						
	Long Wall	Sqm	2	1.50		3.6	10.8
	Short Wall	Sqm	2	1.90		3.6	13.68
	Door Deduction	Sqm	-1	0.75		2.1	-1.58
	Ventilator Deduction	Sqm	-1	0.60		0.9	-0.54
	Ladies Toilet						
	Long Wall	Sqm	2	1.50		3.6	10.8
	Short Wall	Sqm	2	1.90		3.6	13.68
	Door Deduction	Sqm	-1	0.75		2.1	-1.58
	Ventilator Deduction	Sqm	-1	0.60		0.9	-0.54
	Staff Room-Pantry						
	Long Wall	Sqm	2	1.50		3.6	10.8
	Short Wall	Sqm	1	3.00		3.6	10.8
	Window Ded.	Sqm	-1	0.60		0.9	-0.54
						Total	113.39
	First Floor						
	Toilet (2 Nos.)						
	Long Wall	Sqm	4	2.00		3.6	28.8
	Short Wall	Sqm	4	1.60		3.6	23.04
	Door Deduction	Sqm	-2	0.75		2.1	-3.15
	Ventilator Deduction	Sqm	-2	0.60		0.9	-1.08
	Gents Toilet						
	Long Wall	Sqm	2	1.50		3.6	10.8
	Short Wall	Sqm	2	1.90		3.6	13.68
	Door Deduction	Sqm	-1	0.75		2.1	-1.58
	Ventilator Deduction	Sqm	-1	0.60		0.9	-0.54
	Ladies Toilet						
	Long Wall	Sqm	2	1.50		3.6	10.8
	Short Wall	Sqm	2	1.90		3.6	13.68
	Door Deduction	Sqm	-1	0.75		2.1	-1.58
	Ventilator Deduction	Sqm	-1	0.60		0.9	-0.54
	Staff Room-Pantry						
	Long Wall	Sqm	2	1.50		3.6	10.8
	Short Wall	Sqm	1	3.00		3.6	10.8
	Window Ded.	Sqm	-1	0.60		0.9	-0.54
						Total	113.39
	Second Floor Floor						
	Toilet (4 Nos.)						
	Long Wall	Sqm	8	2.00		3.6	57.6
	Short Wall	Sqm	8	1.60		3.6	46.08
	Door Deduction	Sqm	-4	0.75		2.1	-6.3
	Ventilator Deduction	Sqm	-4	0.60		0.9	-2.16
	Gents Toilet						
	Long Wall	Sqm	4	1.50		3.6	21.6
	Short Wall	Sqm	4	1.90		3.6	27.36
	Door Deduction	Sqm	-2	0.75		2.1	-3.15
	Ventilator Deduction	Sqm	-2	0.60		0.9	-1.08
	Ladies Toilet						
	Long Wall	Sqm	4	1.50		3.6	21.6
	Short Wall	Sqm	4	1.90		3.6	27.36

Sr. No.	Description	Unit	No's	L	B	H	Qty.
	Door Deduction	Sqm	-2	0.75		2.1	-3.15
	Ventilator Deduction	Sqm	-2	0.60		0.9	-1.08
	Staff Room-Pantry						
	Long Wall	Sqm	2	1.50		3.6	10.8
	Short Wall	Sqm	1	3.00		3.6	10.8
	Window Ded.	Sqm	-1	0.60		0.9	-0.54
						Total	205.74
53	Providing applying two coats of wall putty to inside plastered walls and ceiling using white cement putty. Scrapping and levelling the surface using steel blade and preparing the surface even and smooth by using different grade sand papers, including cost of all materials, cost of labour and scaffolding etc., complete as per the specification. (KPWD 18-19,Sl.No.15.106,Pg.No.128)						
	Ground Floor						
	Document Submission & Lobby						
1	Longwall-1	Sqm	1	12.76		3.45	44.02
	Door	Sqm	-2	1.10		2.10	-4.62
2	Shortwall-1	Sqm	2	3.25		3.45	22.39
	Lift Door	Sqm	-1	1.00		2.10	-2.1
3	Longwall-2	Sqm	1	8.82		3.45	30.42
	Door	Sqm	-2	1.10		2.10	-4.62
4	Shortwall-2	Sqm	1	4.27		3.45	14.72
	Door	Sqm	-1	1.80		2.10	-3.78
	Security Cabin						
	Long Wall	Sqm	2	1.50		3.00	9
	Short Wall	Sqm	2	2.00		3.00	12
	Ceiling	Sqm	1	1.50		2.00	3
		Sqm				Total	120.43
	First Floor						
	Waiting Area & Lift Lobby						
1	Longwall-1	Sqm	2	9.37		3.45	64.65
	Window	Sqm	-2	2.00		1.20	-4.8
	Door	Sqm	-1	1.80		2.10	-3.78
2	Shortwall	Sqm	2	3.24		3.45	22.37
	Door	Sqm	-2	0.75		2.10	-3.15
	Lift Door	Sqm	-1	1.00		2.10	-2.1
3	Longwall-2	Sqm	1	12.75		3.45	43.99
	Door	Sqm	-1	1.80		2.10	-3.78
		Sqm				Total	113.4
	Second Floor						
	Store Room-1						
1	Longwall-1	Sqm	1	3.19		3.45	10.99
	Window	Sqm	-1	1.50		1.20	-1.8
2	Longwall-2	Sqm	1	3.08		3.45	10.61
	Window	Sqm	-1	1.50		1.20	-1.8
3	Shortwall-1	Sqm	1	1.99		3.45	6.87
	Store room -2						
1	Longwall-1	Sqm	1	3.19		3.45	10.99
	Window	Sqm	-1	1.50		1.20	-1.8
2	Shortwall-1	Sqm	1	1.99		3.45	6.87
3	Shortwall-2	Sqm	1	1.93		3.45	6.66
	Pantry						
1	Shortwall-1	Sqm	1	1.46		3.45	5.03
	Window	Sqm	-1	0.60		1.20	-0.72
2	Longwall-1	Sqm	1	3.31		3.45	11.4
3	Longwall-2	Sqm	1	3.31		3.45	11.4
	Store						
1	Shortwall-1	Sqm	1	1.46		3.45	5.03
2	Window	Sqm	-1	0.60		1.20	-0.72
3	Shortwall-2	Sqm	1	1.31		3.45	4.52
4	Longwall-1	Sqm	1	3.31		3.45	11.4
5	Longwall-2	Sqm	1	3.08		3.45	10.61

Sr. No.	Description	Unit	No's	L	B	H	Qty.
	Office						
1	External wall -westside	Sqm	1	12.69		3.45	43.78
	Windows	Sqm	-4	1.50		1.20	-7.2
2	Longwall-1	Sqm	1	3.45		3.45	11.9
3	Shortwall-1	Sqm	1	1.32		3.45	4.55
4	Shortwall-2	Sqm	1	1.50		3.45	5.17
	Storage						
1	Longwall-1	Sqm	1	5.28		3.45	18.22
2	Shortwall-1	Sqm	1	3.24		3.45	11.18
3	Shortwall-2	Sqm	1	3.65		3.45	12.59
	Doors	Sqm	-2	0.75		2.10	-3.15
4	Longwall-2	Sqm	1	1.54		3.45	5.31
5	Shortwall-3	Sqm	1	0.75		3.45	2.59
	Drinking water wall						
1	Longwall-1	Sqm	1	1.40		3.45	4.83
2	Shortwall-1	Sqm	1	0.75		3.45	2.59
	Pantry Passage walls						
1	Longwall	Sqm	1	1.46		3.45	5.05
	Door	Sqm	-1	0.75		2.10	-1.58
1	External wall - east side	Sqm	1	12.69		3.45	43.78
	Window	Sqm	-4	2.00		1.20	-9.6
	Staircase passage walls						
1	Longwall-1	Sqm	2	4.50		3.45	31.08
2	Shortwall-1	Sqm	1	3.00		3.45	10.35
	Lift Passage						
1	Longwall-1	Sqm	1	4.05		3.45	13.97
2	Longwall-2	Sqm	1	4.44		3.45	15.32
3	Shortwall-1	Sqm	1	2.27		3.45	7.83
4	Shortwall-2	Sqm	1	3.24		3.45	11.18
		Sqm				Total	345.28
	Terrace Floor						
	Storage room						
1	Longwall	Sqm	2	4.50		3.00	27
2	Shortwall	Sqm	2	2.81		3.00	16.83
	Door	Sqm	-1	1.00		2.10	-2.1
			0	0.00		0.00	0
	Staircase		0	0.00		0.00	0
1	Longwall-1	Sqm	1	6.61		3.00	19.82
2	Longwall-2	Sqm	1	4.50		3.00	13.51
3	Shortwall	Sqm	2	3.00		3.00	18
	Door	Sqm	-1	1.00		2.10	-2.1
	Window	Sqm	-1	2.00		1.20	-2.4
		Sqm				Total	88.56
54	KSRB15-3 : Providing 12mm thick cement plaster in single coat with cement mortar, to ceiling including rounding off corners wherever required smooth rendering, including providing and removing scaffolding, cost of materials, labour, curing etc., complete as per specification. do- cement mortar 1:4 (KPWD 18-19,Sl.No.15.22,Pg.No.116)						
	Ground floor						
	Ceiling	Sqm	1	14.00	7.00		98.00
	Security Cabin	Sqm	1	1.50	2.00		3.00
	First Floor LVL						
	Ceiling	Sqm	1	14.00	7.00		98.00
	Second Floor						
	Ceiling	Sqm	1	20.00	14.00		280.00

Sr. No.	Description	Unit	No's	L	B	H	Qty.
55	KSRB15-3 : Providing 18mm thick cement plaster in single coat with cement mortar to brick masonry including rounding off corners wherever required smooth rendering, Providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications. do - cement mortar 1:4 (KPWD 18-19,Sl.No.15.16,Pg.No.116)						
	Ground Floor -Long Wall	Sqm	2	4.00		3.60	28.8
	Ground Floor -Short Wall	Sqm	2	14.00		3.60	100.8
	First Floor-Long Wall	Sqm	2	4.00		3.60	28.8
	First Floor-Short Wall	Sqm	2	14.00		3.60	100.8
	Second Floor External Wall	Sqm					
	Long Wall	Sqm	2	20.50		3.60	147.6
	Short Wall	Sqm	2	13.20		3.60	95.04
	Terrace Parapet Wall						
	Long Wall (Inside and Outside Plaster)	Sqm	4	20.50		1.20	98.4
	Short Wall (Inside and Outside Plaster)	Sqm	4	13.20		1.20	63.36
	External Wall	Sqm	2	25.00		8.00	400
	Add 20% Extra Qty.						212.72
		Sqm				Total	1276.32
56	Providing and fixing Vitrified glazed tiles of approved make, quality & colour of size 600 x 600 x 10mm thick fixed on bed of 12mm thick cement mortar for flooring, skirting and jointed with neat cement slurry mixed with pigment to match shade of tiles, including providing spacers at required interval and removing stains, including cost of all materials, mortar, labour, etc , Complete as per specification. (KPWD 18-19,Sl.No.14.45,Pg.No.109)						
	Ground Flooring						
	Floor	Sqm	1	14.00	3.70		51.8
	Security Cabin	Sqm	1	1.60	2.00		3.2
	Add 10% Extra Qty.	Sqm					5.5
	Toilet Flooring Ded	Sqm					-12.10
						Total	48.40
	First Floor LVL						
	Floor	Sqm	1	14.00	3.70		51.8
	Add 10% Extra Qty.	Sqm					5.18
	Toilet Flooring Ded	Sqm					-10.50
						Total	46.48
	Second Floor LVL						
	Floor	Sqm	1	19.50	13.30		259.35
	Staircase Area	Sqm	-1	4.50	3.00		-13.5
	Toilet Flooring Ded	Sqm					-10.50
						Total	235.35
	Terrace Floor LVL						
	Floor	Sqm	1	19.50	13.30		259.35
	Staircase Area	Sqm	-1	4.50	3.00		-13.5
						Total	245.85
57	KSRB 14.14-5: Providing Ceramic tiles of approved make, shade and size for flooring, treads of steps and landings laid on a bed of 12mm thick, cement mortar 1 3 mix, flush pointing with white cement using colour pigment , including cost of materials, labour, curing, complete as per specifications. for Ceramic Tiles of size 30x30cms, 6mm thick (KPWD 18-19,Sl.No.14.36.2,Pg.No.108)						
	Ground Floor						
	Toilet (2 Nos.)						
	Handicap Toilet	Sqm	1	2.00	1.60		3.20
	Toilet	Sqm	1	2.00	1.60		3.20
	Gents Toilet						
	Flooring	Sqm	1	1.50	1.90		2.85
	Ladies Toilet						
	Flooring	Sqm	1	1.50	1.90		2.85
						Total	12.10

Sr. No.	Description	Unit	No's	L	B	H	Qty.
	First Floor						
	Toilet (2 Nos.)						
	Flooring	Sqm	2	1.50	1.60		4.80
	Gents Toilet						
	Flooring	Sqm	1	1.50	1.90		2.85
	Ladies Toilet						
	Flooring	Sqm	1	1.50	1.90		2.85
						Total	10.50
	Second Floor						
	Toilet (2 Nos.)						
	Flooring	Sqm	2	1.50	1.60		4.80
	Gents Toilet						
	Flooring	Sqm	1	1.50	1.90		2.85
	Ladies Toilet						
	Flooring	Sqm	1	1.50	1.90		2.85
		Sqm				Total	10.50
58	KSRB 14.3 Providing and laying flooring and steps machine cut granite slabs 40mm thick on cement mortar bed 1:6, 25 mm thick, and pointed with cement mortar 1:3 over existing cement concrete bed, including cost of materials, mortar, labour, curing complete as per specifications. Specification No. KBS 14.26						
	Second Floor						
	Step	Sqm	22	1.50		0.30	9.9
	Riser	Sqm	22	1.50		0.18	5.78
	Landing	Sqm	1	3.00		1.50	4.5
		Sqm				Total	20.18
59	Providing and fixing colour glazed tiles of size 300mmx600mm for walls with borders of size 300x100mm, set in Cement Mortar 1:3 and pointed with white cement with matching colour pigment with necessary curing, cleaning including providing and removing scaffolding wherever necessary etc., complete. The work includes cost of all materials, mortar, labour charges for all items of work, hire charges for equipment etc., complete as per specification. (KPWD 18-19,Sl.No.14.64,Pg.No.112)						
	Ground Floor						
	Toilet (2 Nos.)						
	Long Wall	Sqm	4	2.00		3.60	28.8
	Short Wall	Sqm	4	1.60		3.60	23.04
	Door Deduction	Sqm	-2	0.75		2.10	-3.15
	Ventilator Deduction	Sqm	-2	0.60		0.90	-1.08
	Gents Toilet						
	Long Wall	Sqm	2	1.50		3.60	10.8
	Short Wall	Sqm	2	1.90		3.60	13.68
	Door Deduction	Sqm	-1	0.75		2.10	-1.58
	Ventilator Deduction	Sqm	-1	0.60		0.90	-0.54
	Ladies Toilet						
	Long Wall	Sqm	2	1.50		3.60	10.8
	Short Wall	Sqm	2	1.90		3.60	13.68
	Door Deduction	Sqm	-1	0.75		2.10	-1.58
	Ventilator Deduction	Sqm	-1	0.60		0.90	-0.54
	Staff Room-Pantry						
	Long Wall	Sqm	2	1.50		3.60	10.8
	Short Wall	Sqm	1	3.00		3.60	10.8
	Window Ded.	Sqm	-1	0.60		0.90	-0.54
						Total	113.39
	First Floor						
	Toilet (2 Nos.)						

Sr. No.	Description	Unit	No's	L	B	H	Qty.
	Long Wall	Sqm	4	2		3.6	28.8
	Short Wall	Sqm	4	1.6		3.6	23.04
	Door Deduction	Sqm	-2	0.75		2.1	-3.15
	Ventilator Deduction	Sqm	-2	0.6		0.9	-1.08
	Gents Toilet						
	Long Wall	Sqm	2	1.5		3.6	10.8
	Short Wall	Sqm	2	1.9		3.6	13.68
	Door Deduction	Sqm	-1	0.75		2.1	-1.58
	Ventilator Deduction	Sqm	-1	0.6		0.9	-0.54
	Ladies Toilet						
	Long Wall	Sqm	2	1.5		3.6	10.8
	Short Wall	Sqm	2	1.9		3.6	13.68
	Door Deduction	Sqm	-1	0.75		2.1	-1.58
	Ventilator Deduction	Sqm	-1	0.6		0.9	-0.54
	Staff Room-Pantry						
	Long Wall	Sqm	2	1.5		3.6	10.8
	Short Wall	Sqm	1	3		3.6	10.8
	Window Ded.	Sqm	-1	0.6		0.9	-0.54
						Total	113.39
	Second Floor						
	Toilet (2 Nos.)						
	Long Wall	Sqm	4	2		3.6	28.8
	Short Wall	Sqm	4	1.6		3.6	23.04
	Door Deduction	Sqm	-2	0.75		2.1	-3.15
	Ventilator Deduction	Sqm	-2	0.6		0.9	-1.08
	Gents Toilet						
	Long Wall	Sqm	2	1.5		3.6	10.8
	Short Wall	Sqm	2	1.9		3.6	13.68
	Door Deduction	Sqm	-1	0.75		2.1	-1.58
	Ventilator Deduction	Sqm	-1	0.6		0.9	-0.54
	Ladies Toilet						
	Long Wall	Sqm	2	1.5		3.6	10.8
	Short Wall	Sqm	2	1.9		3.6	13.68
	Door Deduction	Sqm	-1	0.75		2.1	-1.58
	Ventilator Deduction	Sqm	-1	0.6		0.9	-0.54
	Staff Room-Pantry						
	Long Wall	Sqm	2	1.5		3.6	10.8
	Short Wall	Sqm	1	3		3.6	10.8
	Window Ded.	Sqm	-1	0.6		0.9	-0.54
		Sqm				Total	113.39
60	Providing and Fixing Laterite Stone Cladding 25mm thk (polished) with an adhesive over existing cement palster surface with two coat of polish,including all lead and lifts,scaffoldingetc. and complete.						
	Front Wall	Sqm	1	14		7	98
	RCC Jali Deduction	Sqm	-2	4.7		1.6	-15.04
	Window Deduction	Sqm	-3	1.4		1.2	-5.04
	Door Deduction	Sqm	-2	2.1		1.2	-5.04
		Sqm				Total	72.88
61	Providing and fixing of wall cladding using 20 mm thick gang saw water cut granite in CM 1:3 proportion cut to required shape patron with paper joint finished with cement mortar using white cement and colour pigments to match the colour of slab making through jointing with sealant, making holes 25mm x 12mm grooves in JOints including cost of all materials, mortar, labour, curing etc., complete as per specification. do- with grey granite 20mm thick gang saw with minimum width 1200 mm						
	Ground Floor	Sqm	1	3.5		3	10.5
	Door Deduction	Sqm	-1	1.2		2.1	-2.52
		Sqm					7.98

Sr. No.	Description	Unit	No's	L	B	H	Qty.
	First Floor	Sqm	1	3.5		3	10.5
	Door Deduction	Sqm	-1	1.2		2.1	-2.52
		Sqm				Total	7.98
	Second Floor	Sqm	1	3.5		3	10.5
	Door Deduction	Sqm	-1	1.2		2.1	-2.52
		Sqm				Total	7.98
	Third Floor	Sqm	1	3.5		3	10.5
	Door Deduction	Sqm	-1	1.2		2.1	-2.52
		Sqm				Total	7.98
62	Providing and laying platform using prepolished, water cut I gang saw 40mm thick telephonic Black Granite. laid on existing vertical -supports and fixing in CM 1:3 proportion. Including cutting to required shape, pattern with paper joints, including full rounding for nosing, finished with cement mortar, pointed with colour pigments to match the colour of slab making through jointing with sealant, making holes 25mm x 12mm grooves in JOints including cost of all materials, mortar, labour, curing etc., complete as per specification. (KPWD 18-19,Sl.No.14.52,Pg.No.110)						
	Ground Floor-Pantry	Sqm	1	1.9	0.75		1.43
	First Floor-Pantry	Sqm	1	3.31	0.75		2.48
	Second Floor-Pantry	Sqm	1	3.31	0.75		2.48
		Sqm					6.39
63	KSRB 15-15.1 • Providing and applying painting in two coats with plastic emulsion paint of approved brand on wall surface to give an even approved shade after thoroughly brushing the surface, free from mortar drops and other foreign matter including preparing the surface even and sand paper smooth, cost of materials, labour, complete as per specifications.do- with primer (KPWD 18-19,Sl.No.15.51.2,Pg No.119)						
	Internal Plaster Qty	Sqm					667.67
	Add 20% Extra Qty.	Sqm					133.53
						Total	801.20
64	Providing external walls with texture finish using approved brand paint, applied uniformly in three coats over one coat of primer including cost of all materials, machineries, labour, transportation, loading and unloading, all lead and lift and all other incidental charges including scaffolding and removing stains, complete as per specifications. (KPWD 18-19,Sl.No.15.103,Pg No.127)						
	Ground Floor						
	Long Wall	Sqm	2	19.50		4.00	156.00
	Short Wall	Sqm	2	13.20		4.00	105.60
	First Floor						
	Long Wall	Sqm	2	19.50		4.00	156.00
	Short Wall	Sqm	2	13.20		4.00	105.60
	Second Floor						
	Long Wall	Sqm	2	19.50		4.00	156.00
	Short Wall	Sqm	2	13.20		4.00	105.60
	Terrace						
	Long Wall(External and Internal Surface)	Sqm	4	19.50		1.20	93.60
	Short Wall(External and Internal Surface)	Sqm	4	13.20		1.20	63.36
	Security cabin						
	Long Wall	Sqm	2	1.96		4.00	15.68
	Short Wall	Sqm	2	2.46		4.00	19.68
	Compound Wall	Sqm	2	150.00		3.20	960.00
	Pergola Column	Sqm	15	1.60		8.00	192.00
	Pergola Beams	Sqm					

Sr. No.	Description	Unit	No's	L	B	H	Qty.
	B1	Sqm	1	12.76		1.36	17.35
	B2A	Sqm	1	10.60		1.80	19.08
	B3	Sqm	1	2.00		1.36	2.72
	B4-Long	Sqm	1	3.20		1.36	4.35
	B4-Short	Sqm	1	1.00		1.36	1.36
	B5	Sqm	1	3.25		1.36	4.42
	B6	Sqm	1	3.25		1.36	4.42
	B7	Sqm	1	3.25		1.20	3.90
	B8	Sqm	3	12.86		1.50	57.87
	B9	Sqm	5	10.50		1.50	78.75
	B10	Sqm	7	10.50		1.36	99.96
		Sqm				Total	2423.31
65	KSRB 10-3 :Providing and laying integral cement based waterproofing treatment including preparation of surface as required for treatment of roofs, balconies, terraces etc , consisting of following application. (a) Applying and grouting a slurry coat of neat cement using 2.75 kglsqm of cement admixed with proprietary water proofing compound conforming to 18:2645 over the RCC slab after cleaning the surface before treatment. (b) Laying cement concrete using broken brick bats 25mm to 100mm size with 50% of cement mortar 1:5 admixed with proprietary water proofing compound conforming 18:2645 over 20mm thick layer of cement mortar 1:5 admixed with proprietary water proofing compound to required slope and treating similarly the adjoining walls upto 300mm height including rounding off junctions of walls and slabs. (c) After two days of proper curing, applying a second coat of cement lurry admixed with proprietary water proofing compound (d) Finishing the surface with 20mm thick joint less cement mortar of mix 1:4 admixed with proprietary water proofing compound and finally finishing						
	Second Floor Slab	Sqm	1	19.5	13.2		257.40
	Security Cabin Roof Slab	Sqm	1	1.5	2		3.00
		Sqm				Total	260.40
66	Waterproofing of RCC Terrace I podium slab I toilet I utilities I water retaining structure by preparing the surface by chipping and cleaning and Grouting of Honey comb, voids,cracks I construction joints with cement slurry (1kg cement added in 10 ltr of water) added with 100gm of inorganic accelerator, followed by spraying of liquid biological modified alkaline earth silicates@ 040 ltr per sqm on whole surface to reduce the micro porosity and allowing it to dry, curing the surface for the silicates to penetrate deeper into the concrete and spraying waterproofing impregnate liquid containing silane and silanollinear copolymer@ 0.50 ltr per sqm and finally applying polymer slurry made out of cross linked acrylic I styrene I butadiene & cement in the ratio of 1:0.1, @ 0.50kglsqm on the whole surface, including all labour charges tools and equipments, all complete as per the specification (KPWD 18-19,Sl.No.10.5.1,Pg.No.69)						
	Toilet	Sqm	6	2.00	1.60		19.20
	Toilet	Sqm	6	1.50	1.90		17.10
		Sqm				Total	36.30
67	KSRB 9.4-1 : Providing wood frames of doors, windows, clerestory windows, ventilators and other frames, wrought, framed or assembled including making plaster groves (excluding cost of cement concrete and side clamps), but including cost of materials, labour, HOM complete as per specifications. Specification No. KBS 9.33KSRB 9.4-3 : -do - Mathi I Nandi wood frames (KPWD 18-19,Sl.No.9.12,Pg.No.53)						

Sr. No.	Description	Unit	No's	L	B	H	Qty.
	Single Leaf Door-1.2m Wide	Cum	7	5.40	0.075	0.063	0.18
	Double Leaf Door-1.8m Wide	Cum	3	5.70	0.075	0.063	0.08
		Cum				Total	0.26
68	KSRB 9.5 : Providing and fixing in position fully panelled wood shutters for doors, with styles and rails of 40mm. thick with bottom and lock rails 180mm wide top rail and styles 100mm wide as per drawing and panels of 25mm thick including cost of materials, labour, HOM complete as per specifications. (excluding cost of fixtures) Specification No. KBS 9.34KSRB 9-6.3 :do- MathiiNandi wood styles and rails of 35mm thick (KPWD 18-19,Sl.No.9.19,Pg.No.53)						
	Ground Floor						
	Single Leaf Door-1.2m Wide	Sqm	2	1.2		2.1	5.04
	Double Leaf Door-1.8m Wide	Sqm	1	1.8		2.1	3.78
		Sqm				Total	8.82
	First Floor						
	Single Leaf Door-1.2m Wide	Sqm	2	1.2		2.1	5.04
	Double Leaf Door-1.8m Wide	Sqm	1	1.8		2.1	3.78
		Sqm				Total	8.82
	Second Floor						
	Single Leaf Door-1.2m Wide	Sqm	1	1.2		2.1	2.52
	Double Leaf Door-1.8m Wide	Sqm	1	1.8		2.1	3.78
		Sqm				Total	6.30
	Terrace Floor						
	Single Leaf Door-1.2m Wide	Sqm	2	1.2		2.1	5.04
		Sqm				Total	5.04
69	SOLID PANEL PRELAM PVC DOOR SHUTTER Providing & fixing 30mm thick factory made rigid foam Prelam Panelled Door Shutters made from M.S. tube of 19x19mm, 19 gauge for styles and 15x15mm for top & bottom rails, covered with heat moulded Prelaminated PVC C Channel of 5mm thick sheet & 30x50mm wide to form styles & 5mm thick & 75mm wide Prelaminated PVC Sheets for top rail, lock rail & bottom rail on either side & 5mm thick, 20mm wide cross PVC sheet as gap insert for top rail & bottom rail, Panelling of 5mm thick PVC sheet Prelaminated on either side fitted in the M.S. frame,Sealed to the styles & rails with PVC Designer beading on either side & joined together with solvent cement adhesive etc., Complete as per manufacturers specification & direction of Engineer-in-charge fixed to frames with 3 nos of 75mm. Aluminium hinges.do- with both side prelam (KPWD 18-19,Sl.No.9.85,Pg No.60 & 61)						
	Ground Floor						
	Toilet Door	Sqm	2	0.9		2.1	3.78
	First Floor						
	Toilet Door	Sqm	2	0.9		2.1	3.78
	Second Floor						
	Toilet Door	Sqm	4	0.9		2.1	7.56
		Sqm				Total	15.12

Sr. No.	Description	Unit	No's	L	B	H	Qty.
70	Providing and fixing pre fabricated non-monolithic R.C.C. Door Frames factory manufactured in separate parts and assembled at bolt nuts system with mechanical table vibrating as per IS 6523-1983 with using M25 concrete as per IS 456 with a cross section of 60 mm x 100 mm reinforced with 1.70 kg of TMT steel reinforced with 3 Nos. of 6 mm dia Main TMT bars and 6 mm Dia TMT stirrups welded at 40 cm c/c in triangle shape per meter length of door frames, including cost of steel and fabrication charges having 3/4 No. Stainless Steel hinges plate attachment made of 165 mm x 25 mm x 2.5 mm Stainless Steel Flat welded with required iron rods and flats with drilling for fixing flat CSK Head Machine screws and nut made out of 304 grade stainless steel screws, nut and MS square nut of size 8 x 8 square and length 10 mm and making necessary provision in concrete for fixing aldrops, tower bolts and hold fasts etc., complete including two coats of oil based enamel primer providing without cill for shutter thickness upto 30 mm, 21 days tank immersed curing including cost of labour, materials, HOM						
	Ground Floor						
	Toilet Door	Rmt	2	4.95			9.90
	First Floor						
	Toilet Door	Rmt	2	4.95			9.90
	Second Floor						
	Toilet Door	Rmt	4	4.95			19.80
		Rmt					39.60
71	Providing and fixing Single shutter glass door of 12mm thick plain toughened glass. The door is fixed by using any approved make hardware fitting like patch fitting, pivot, floor machine, locking arrangements and suitable SS door rails with floral glass etching for 1/3 portion of door area etc complete. The rate includes cost of all materials, labour, hire of tools & machineries, and as per specification.						
	Ground Floor	Sqm	4	1.2		2.1	10.08
	Second Floor	Sqm	4	1.2		2.1	10.08
		Sqm				Total	20.16
72.00	Providing and fixing of Louvered ventilator made out of multi chambered UPVC (Matching to RAL-9016) sections and with minimum TiO2 (Titanium Dioxide) at 6PHR with TPV (Thermo plastic Vulcanized) and lead free with gaskets -grey colour having isolated drainage and reinforced with Galvanized Iron profile through-out the ventilator frame.The frame having overall size of 39mm x 39mm with GI reinforcement of 1mm thickness.Louver Clip in Aluminium (Powder Coated in white) will be used on the frame along with plastic parts of fixing the 4mm pin head glass.Wall thickness of frame shall be 2mm.Maximum possible size - 1000mm x 1000mm (KPWD 18-19,SI.No.38.44.2,Pg.No.308)						
	Ground Floor						
	Toilets-Ventilators	Sqm	2	0.75		0.9	1.35
	First Floor						
	Toilets-Ventilators	Sqm	2	0.75		0.9	1.35
	Second Floor						
	Toilets-Ventilators +Pantry +Store	Sqm	6	0.75		0.9	4.05
						Total	6.75

Sr. No.	Description	Unit	No's	L	B	H	Qty.
73	Providing and fixing 304- grade stainless steel hand rails of 14-gauge pipes for Ramps staircase made out of stainless steel hollow pipes, using 50mm dia for verticals @1.60 mtr c/c fixed to the ramps or steps by drilling with bolts and 100mm dia MS base plates 10mm gauge for fixing of Vertical pipes 4 - Nos anchor bolts & 40mm dia pipes fixed horizontally for 2-rows top, one pipes fixed with vertical pipes another one fixed with elbows and 25mm dia pipes are fixed horizontally for 2-rows below top measure @ equal intervals including cutting, welding, bending wherever necessary with suitable caps @ tops, bottoms & corners finishing with mat l shining etc., complete including cost and conveyance of all materials, labour for all items of work, HOM with all lead and lift, loading and unloading, transportation charges and all other incidental charges etc., complete as per specification and directions of the Engineer-in-charge of the work. Ramps or Staircase for physically challenged. (KPWD 18-19,Sl.No.7.39,Pg.No.45)						
	Staire Case	Sqm	4	4		1.2	19.20
		Sqm				Total	19.20
74	Providing and fixing M.S. Hand railing for Balcony/Staircase etc., with 50mm dia. M.S. hollow pipe of 14 gauge, welded to 20mmx20mm M.S. square rod placed vertically, spaced at 100mm at regular intervals of 600mm. These vertical rods laterally tied to 3 horizontal rods spaced at equal interval. These assembly is fixed to concrete by using expansion bolts and welding the same to reinforcement bars and making good the surface. All the joints and sections should be cut to length, welded and grinded wherever necessary etc., complete. The work includes cost of all materials, labour charges for all items of work, hire charges for welding, cutting and grinding equipment, and electricity charges, etc., complete as per specification and drawing.						
	Ground Floor	Sqm	1	22.00		1.20	26.00
	Ground Floor	Sqm	1	10.00		1.20	12.00
							38.00
75.00	Providing and fixing anchor bolts as specified in RCC Drawings (KPWD 18-19,Code No.0764)		Column	No. Of Anchor Bolts			
	Insert Plate	No	27	4			108.00
	Foundation Bolts	No	6	30			180.00
						Total	288.00
	Wt. Of one anchor bolt=4kg	Kg					1152.00
76.00	KSRB 8.7-5 : Providing and fixing in position 12mm thick plaster of paris (Gypsum anhydrous) for ceiling reinforced with hessian cloth flat surface with ceiling tiles up to a height of 5 m above floor level over aluminium strips 25mm x 6mm and rendered smooth with plaster of paris including cost of materials, labour, curing complete as per specifications. KPWD 18-19,Sl.No.8.24						
	Ground Floor	Sqm	1	19.50	13.50		263.00
	Second Floor	Sqm	1	19.50	13.50		263.00
	Staire Case Ceiling	Sqm	-3	4.50	3.00		-41.00
						Total	485.00

Sr. No.	Description	Unit	No's	L	B	H	Qty.
77.00	KSRB 1.11 : Providing and fixing in position aluminium windows and ventilators as per approved drawings with sliding shutters using three track window frame of size 92x31.75mm bottom section 1.3mm thick, weight 1.07kg/m; sides and top sections 1.3 mm, thick, weight 0.933 kg/m.shutter frame section comprising top and bottom section of size 40mmx18mm, wall thickness 1.25mm. weight 0.417 kg./m. shutter side outer 40mmx18mm. wall thickness 1.25mm. weight 0.417 kg/m, shutter interlock section 40mmx26. 7mm wall thickness 1.1 mm. thick, weight 0.469 kg/m, the shutters mounted on nylon rollers with approved quality of fixtures such as aluminium handles tower bolts etc.; providing and fixing 5.5mm. thick plain glass for shutters fitted with rubber beading all aluminium sections including cutting to required length, joints mitred subdividing the frame tenonned and rivetted, in the assembled frame, stiffened with end clips for corners, angles etc., and fixed to the walls, lintels, floor beams/cills as the case may be,						
	Ground Floor						
	Window	Sqm	3	1.50	1.20		5.40
	Security Cabin	Sqm	1	1.20	1.20		1.44
						Total	6.84
	Second Floor						
	Window (2m Wide)	Sqm	5	2.00	1.20		12.00
	Window (1.5m Wide)	Sqm	7	1.50	1.20		12.60
	Window (1m Wide)	Sqm	2	1.00	1.20		2.40
						Total	27.00
78.00	Providing , fabricating, assembling and fixing in position Aluminium partition using 101.60mm x 44.45mm x 3.18mm aluminium, mat finish or glossy finish , anodized sections combination of plain, single groove and double groove members should not exceed 0.60mc/c and bottom member of required lengths, joints mitred and corner grinded sub dividing assembled frame should be stiffened with corner angles. Stripped and fixed with screws rawl plug and teakwood guttas to RCC column or masonry on sides. RCC lintels or beams at top and mosaic floor at bottom; including cutting chistelling and making good with cement mortar to match the surface . Providing and fixing 12mm. thick prelaminated sheet (Ecoboard - exterior grade) of approved colour for bottom panel of maximum height 0.9m, and 5.50 mm thick						
	Ground Floor						
	Cabin For Enquiry	Sqm	4	4.75	3.2		60.80
	Regitration Counter	Sqm	1	9	3.2		28.80
	Data Entry Counter and Technical Counter	Sqm	1	16.26	3.2		52.03
	At Entrance	Sqm	1	3.25	3.2		10.40
	Second Floor						
	Server Room+Meeting Room+Officer Cabin	Sqm	1	20.1	3.2		64.32
	Work Station	Sqm	1	22.3	3.2		71.36
		Sqm				Total	287.71
79.00	Providing and Fixing Handcarving Cornice and Bracket made up of Burma Wood as per the drawings and as instructed by Architect.						
	Cornice	Sqm	2	1.5		1	3.00
	Bracket	Sqm	2	0.5		1	1.00
						Total	4.00
80.00	Providing precast cement concrete Jali 1:2:4 (1 cement : 2 coarse sand(zone-III) : 4 graded stone aggregate 6mm nominal size), reinforced with 1.6 mm dia mild steel wire, including centering and shuttering, roughening cleaning, fixing and finishing in cement mortar 1:3 (1 cement: 3 fine sand) etc. complete, excluding plastering of the jambs, sills and soffits. 50 mm thick (CPWD 2018 SI No 5 18 1 Pa No 08)						
	RCC Jali	Sqm	2	5	2		20.00

Sr. No.	Description	Unit	No's	L	B	H	Qty.
						Total	20.00
81.01	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). The weight of aluminium extruded section shall be taken for purpose of payment.						
	Area of Glazing	Sqm	1	168.00			168.00
				Area		Kg/Sqm	
	Assume Aluminium Consumption @5kg/Sqm	Kg	1	168.00		5	840.00
81.02	Double Glazing Grid: 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: (a) Structural analysis & design and preparation of shop drawings for the specified design loads conforming to IS 875 part III (the system must pass 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,	Sqm	1	16	10.5		168.00
	(b) 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						
	(d) 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						
	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-						
	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						
	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						

Sr. No.	Description	Unit	No's	L	B	H	Qty.
81.03	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 strengthened 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 coordinated by the Engineer in charge.	Sqm	1	16	10.5		168.00
	(Payment for fixing of IGU Panels in the curtain glazing is included in cost of item No.25.2) 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. (i) 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 (Note: The properties of performance glass shall be as per IRC:35)						
82.00	Providing and Fixing SS 304 Outdoor Dustbin(Pivoted Type and Mounted on SS Poles) of 55 liters capacity all complete to the satisfaction of the Engineer in charge. (NON SOR Item)	Nos.	5				5.00
83.00	Road Marking with hot applied Thermoplastic Compound with Reflectrising Glass Beads on Concrete Surface:Providing and laying of hot applied thermoplastic compound 2.5mm thick including reflectorising glass beads at 250 gms and 2 ltr of primer per sqm area,thickness of 2.5mm is exclusive of surface applied glass beads as per IRC:35.The finished surface to be level,uniform and free from streak and holes complete as						
	Dash Line	Sqm	0.6	230		0.15	20.70
	Edge Line	Sqm	2	230		0.15	69.00
	Arrow	Sqm	15	0.76	Area/Rm		11.40
	Pedstrian Crossing	Sqm	4	12	1.4		67.20
		Sqm				Total	168.30
84.00	Fabricating, providing and erecting in poiston of M S Ornamental security Grill Gate/Fencing on compound wall without hot dip using 75 x 12mm M S Flat for alround frame work with verticals at the centre and horizontal centere support M S Square of 20 x20 mm of different heights as shown in the drawing are to be fixed at 16 cms C/C for suqare bars of full height and at 8cms C / C for bottom rods providg ornamental C I Designers at the botom and C I arrows inthe midle and top. The entire frame work is to be fixed by means of expansion bolts to the brick pillars with necessary drilling holes. the work includes providng two coats of enamel painting over one coatr of red lead ready mix primer coat etc complete cost of all labour, painting, erection charges using hoist						
	Double Leaf Security Gate	Sqm	1	3		1.76	5.28
	Single Leaf Security Gate	Sqm	1	1.5		1.76	2.64
							7.92
				Area	Kg/Sqm		
	Weight=50 Kg/Sqm			7.92	50		396.00
85.00	Providing and Fixing SS Steel Chairs as specified by Architect.	Nos.	10				10.00

Sr. No.	Description	Unit	No's	L	B	H	Qty.
86.00	P/F FRP Water gully cover with frame (25T) 600mmx500 mm on SWD (Rate analysis attached)						
	SWD	Rm	230				230.00
	Manhole Cover @ 5m C/C	Nos.	47				47.00
87.00	Providing and fixing of S.S. Bollards(SS304) on footpath as specified and directed by Engineer -in-charge	Nos.	20				20.00
88.00	Supplying and Fixing Passanger elevator of 8 Person Capacity of approved make and as per directed by Engineer in charge.	Nos.	1				1.00
89.00	Extra Lead for Disposing off unserviceable materials upto 10 Km beyond initial Lead of 5km Item No 17.4 KSRRB M100-4.1-Debris						
	Debris Qty. add 20% Extra	Cum	1	180.02			180.02
						Total	180.02
90.00	Extra Lead for Disposing off unserviceable materials upto 10 Km beyond initial Lead of 5 km Item No 17.4 KSRRB M100-4.1-Earth						
	Total Excavation	Cum	1	1698.68			1698.68
	Refilling Qty.	Cum	-1	620.26			-620.26
		Cum				Disposal Qty.	1078.42

**Assistant Engineer
MSCL Mangaluru**

**Assistant Executive Engineer
MSCL Mangaluru**

**Executive Engineer
MSCL Mangaluru**

**General Manager Technical
MSCL Mangaluru**

Rate Analysis - UPOR				
1	KSRRB M200-11.1. Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned, including removal and disposal of top organic soil not exceeding 150 mm in thickness complete as per specifications and as directed by engineer in charge. II. By Mechanical Means: A. In area of light jungle. MORTH Specification No. 201 (KPWD 18-19,Sl.No.18.15)			
	Basic rate		18526	
	Add 10% For area weightage (Mangalore City)		1852.6	
		Rate	20378.60	Ha
2	KSRRB M200-12.1. Dismantling of existing structures like culverts, bridges, retaining walls and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts complete as per specifications and as directed by engineer in charge. i) Lime /Cement Concrete. I. By Manual Means: A. Lime Concrete, cement concrete grade M-10 and below. MORTH Specification No. 202 (KPWD 18-19,Sl.No.18.17)			
	Basic rate		454	
	Add 10% For area weightage (Mangalore City)		45.4	
		Rate	499.40	Cum
3	KSRRB M200-15.1. Dismantling of existing structures like culverts, bridges, retaining walls and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts complete as per specifications and as directed by engineer in charge. iii) Dismantling Stone Masonry. MORTH Specification No. 202 KSRRB M200- 15.2. do- B. Rubble stone masonry in cement mortar. (KPWD 18-19,Sl.No.18.27)			
	Basic rate		351	
	Add 10% For area weightage (Mangalore City)		35.1	
		Rate	386.10	Cum
4	KSRRB M200-32. Removal of Telephone /Electric poles including excavation and dismantling of foundation concrete and lines under the supervision of concerned department, disposal with all lifts and stacking the serviceable and unserviceable material separately complete as per specifications. MORTH Specification No. 202 (KPWD 18-19,Sl.No.18.57)			
	Basic rate		217	
	Add 10% For area weightage (Mangalore City)		21.7	
		Rate	238.70	Nos
5	KSRRB M200-14.1. Dismantling of existing structures like culverts, bridges, retaining walls and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts complete as per specifications and as directed by engineer in charge. KSRRB M200-14.2. do- Dismantling brick/Tile work B. In cement mortar. (KPWD 18-19,Sl.No.18.23)			
	Basic rate		351	
	Add 10% For area weightage (Mangalore City)		35.1	
		Rate	386.10	Cum

6	KSRRB M200-15.1. Dismantling of existing structures like culverts, bridges, retaining walls and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts complete as per specifications. iKSRRB M200-17.1. do- v) Steel work in all types of Sections upto a Height of 5 m above plinth level excluding Cutting of Rivet. - A. Including dismembering."			
	Basic rate		1893	
	Add 10% For area weightage (Mangalore City)		189.3	
		Rate	2082.30	MT
7	Dismantling doors, windows and clerestory windows (steel or wood) shutter including chowkhats, architrave, holdfasts etc. complete and stacking as directed by Engineer in charge with all leads and lifts. Of area 3 sq. metres and below (CPWD 2018 15.12.1)			
	Basic rate		274.5	
		Rate	274.50	Nos.
8	Dismantling cement concrete flooring or plain cement concrete work including removing and conveying the debris to distance 10km (within average thickness of 15 cms). including cost of materials, labour, HOM complete as per specifications. (KPWD 18-19,SI.No.37.51)			
	Basic rate		86	
	Add 10% For area weightage (Mangalore City)		8.6	
		Rate	94.60	Sqm
9	Dismantling roofing including ridges, hips, valleys and gutters etc., and stacking the material as directed by engineer in charge with all leads and lifts. 15.28.1 G.S. Sheet. (CPWD 2018 15.18.1)			
	Basic rate		121.9	
		Rate	121.90	Sqm
10	Taking out existing CC interlocking paver blocks from footpath/ central verge, including removal of rubbish etc., disposal of unserviceable material to the dumping ground, for which payment shall be made separately and stacking of serviceable material within 50 metre lead as per direction of Engineer-in-Charge.(RA attached)			
	Basic rate		68.16	
	Add 10% For area weightage (Mangalore City)		6.82	
		Rate	74.98	Sqm
11	Earth work excavation for foundation of structures upto 3 mtrs. by mechanical means as per drawing and technical specification, including setting out, providing shoring, strutting and bracing, removal of stumps and other deleterious matter, dressing of sides and bottom, filling back the excavated earth to the extent required and utilising I transporting the remaining earth upto 1.00km lead. including cost of labour, materials and HOM etc., complete. do-In all types of soils (KPWD 18-19,SI No.2.23.1,Pg.No.8)			
	Basic rate		52	
	Add 10% For area weightage (Mangalore City)		5.2	
		Rate	57.20	Cum
12	Earth work excavation for foundation of structures upto 3 mtrs. by mechanical means as per drawing and technical specification, including setting out, providing shoring, strutting and bracing, removal of stumps and other deleterious matter, dressing of sides and bottom, filling back the excavated earth to the extent required and utilising I transporting the remaining earth upto 1.00km lead. including cost of labour, materials and HOM etc., complete.do- Soft rock/ordinary rock (without blasting) (KPWD 18-19,SI No.2.23.2,Pg.No.8)			
	Basic rate		67	
	Add 10% For area weightage (Mangalore City)		6.7	

		Rate	73.70	Cum
13	Earthwork in excavation for foundation of structures by Mechanical means as per drawing and technical specification including setting out construction of shoring, strutting, barricading, danger light, bracing, removal of slumps and other detrious matter, dressing of sides and levelling the bottom of trench to the extent required, utilising the available excavated earth locally for the work etc. complete. (Depth upto 3m). Hard Rock-Any rock Excavation by using mechanical plants/machinery (KUWSDB 18-19, Sl.No.vii.1c, Pg.No.7)			
	Basic rate		677	
	Add 10% For area weightage (Mangalore City)		67.7	
		Rate	744.70	Cum
14	KSRB 2.3 : Filling available excavated earth (excluding rock) in sides of foundations upto plinth in layers not exceeding 20 cms. in depth, compacting each deposited layer by ramming after watering with lead upto 50 m. and lift upto 1.5 m. including cost of all labour complete as per specifications. specification. No. KBS 2.9 (KPWD 18-19, Sl.No.2.10, Pg No.7)			
	Basic rate		201	
	Add 10% For area weightage (Mangalore City)		20.1	
		Rate	221.10	Cum
15	Providing Muram/Gravel Bedding for the pipeline trenches/ at Plith below grade slab, including watering and consolidation by punners etc., complete with all lead and lift as directed including barricading, danger lighting etc., as directed by the Engineer-in-Charge etc., complete, for all type of soils excluding black cotton soil and rock reaches. KUWSDB 18-19, Pg No.9, Sl No.6.2			
	Basic rate		259	
	Add 10% For area weightage (Mangalore City)		25.9	
		Rate	284.90	Cum
16	KSRB 2.8 : Providing and Filling in foundation with granite / trap broken metal 100mm. and down size, with approved sand including hand packing, ramming, watering, including cost of all materials and labour with all lead and lift. complete as per specifications. specification. No. KBS (KPWD 18-19, Sl.No.2.15, Pg.No.7)			
	Basic rate		2541	
	Add 10% For area weightage (Mangalore City)		254.1	
		Rate	2795.10	Cum
17	KSRRB M300-14. Excavation for roadwork in all types of soil with hydraulic excavator of 0.9 bucket capacity including cutting and loading in tippers, trimming bottom and side slopes, in accordance with requirements of lines and grades and cross sections, and transporting disposal location up to a lead of 5.00Km and complete as per specifications. MORTH specification No.301(Including transporting charges, loading and unloading for lead 5km) (Page No 143, Sl No : 19.14)			
	Basic rate		41	
	Add 10% For area weightage (Mangalore City)		4.1	
		Rate	45.10	Cum
18	KSRRB M300-55. Construction of sub-grade transporting to site, spreading, grading to required slope and compacted to meet requirement of Table No. 300-2 complete as per specifications, including cost of earth, watering charges & compaction by vibratory roller to 97% of modified proctors density) MORTH Specification No. 305 (KPWD 18-19, Sl.No.19.62, Pg.No.147)			
	Basic rate		513	
	Add 20km lead (17.4 KSRRB M100-4.1-Cost of haulage excluding loading and unloading MORTH-100/Chapter 1-case 1-Surface Road)=2.0Rs/ Tkm x 1.28 T x 20km		51.2	

	Sub Total		564.2	
	Add 10% For area weightage (Mangalore City)		56.42	
		Rate	620.62	Cum
19	KSRRB M400-6.2.Construction of granular sub base by providing close graded crushed stone aggregate of granite/trap/basalt material,spreading in uniform layers with motor on prepared surface,mixing by mix in place methode by rotavator at OMC, and compacting with vibratory power roller to achieve the desired density,complete as per specification. B.By Mix in Place Methode. Close graded granular sub base material as per 400-1 For Grading II material (Page No 155,SI No : 20.5.2)			
	Basic Rate		2166	
	Add 10% For area weightage (Mangalore City)		216.6	
		Rate	2382.60	Cum
20	KSRRB M600-1.Construction of dry lean cement concrete mix M15 with 1:5:10 OPC cement @160Kgs,with 25mm and down size graded granite/trap/basalt metal coarse aggregate at 0.86cum and fine aggregate @ 0.58cum Sub-base over prepared sub grade with (coarse and fine aggregate confirming to IS:383) aggregate cement ration not to excee 15:1. Aggregate gradation after blending to be as per Table 600-1, cement content to be determined during trail length construction, concrete strength not to be less than 10Mpa at 7 days,mixed in a batching plant,transported to site,laid with a paver with electronic sensor,compacting with 8-10 tonnes double drum vibratory roller,finishing and curing complete as per specifications.Morth specification No.601 (SI No : 22.1.1 of KPWD 18-19)			
	Basic Rate		4048	
	Add 10% For area weightage (Mangalore City)		404.8	
		Rate	4452.80	Cum
21	KSSRRB M600-2.Construction of unreinforced,dowel jointed,plain cement concrete pavement over a prepared sub base with 25mm and down size graded granite metal coarse aggregate with superplastisizer at 3 lts confirming to IS9103-1999 reaffirmed 2008(Coarse and fine aggregate confirming to IS:383) mixed in a batching and mixing plant as per approved mix design,transported to site,laid with a fixed form or slip form paver spread,compacted and finished in a continuos operation including provision of contraction, expansio, construction and longitudinal joints,including groove cutting chrges, joints filler,separation memberane, sealent primer, joints sealant, debonding strip, dowel bars at 4.5m intervals, tie rod, admixtures as approved, curing compound,finishing to lines and grades as per drawing complete as per sprcifications MORTH specification No.602.do with M40 (420Kg per cum Cement,C.A,0.67 cum F.A.044Cum (Page No 176,SI No : 22.2.2)			
	Basic Rate		5765	
	Add 10% For area weightage (Mangalore City)		576.5	
		Rate	6341.50	Cum
22	Providin and fixing pre cast solid concrete Kerb stones made out of CC 1:2:4 with top and bottom width 114 and 165mm respectively,400mm high and 450mm in length finished with CM 1:3 Plastering and finishing cutting, including cost of all materials,labour,hire charges of machinery,loading,unloading,lead and lift,transportation etc.,complete (Page No 25,SI No : 5.3)			
	Basic rate		421	
	Add 10% For area weightage (Mangalore City)		42.1	
		Rate	463.10	Nos.
23	KSRRB 800-1. Painting two coats after filling the surface with synthetic enamel paint in approved shades on new plastered concrete surfaces, with materials, labour complete as per MORTH specifications section 8. (SI No : 24.1 of KPWD 18-19)			
	Basic Rate		80	
	Add 10% For area weightage (Mangalore City)		8	

		Rate	88	Sqm
24	KSRRB M800-29.3.Cable Duct Across the road KSRRB M800-29.1. Providing and laying of a reinforced cement concrete pipe duct, 300 mm dia, across the road (new construction), extending from drain to drain in cuts and toe of slope to toe of slope in fills, constructing head walls at both ends, providing a minimum fill of granular material over top and sides of RCC pipe as per IRC:98-1997, bedded on a 0.3 m thick layer of granular material free of rock pieces, outer to outer distance of pipe at least half dia of pipe subject to minimum 450 mm in case of double and triple row ducts, joints to be made leak proof, invert level of duct to be above higher than ground level to prevent entry of water and dirt, all as per IRC: 98 - 1997 and approved drawings complete as per specifications. Case-III :Triple row for three utility services. (PWD SR 2018-19,SI.No.24.36)			
	Basic Rate		5022	
	Add 10% For area weightage (Mangalore City)		502.2	
		Rate	5524.20	Rm
25	KSRRB M400-6.1. Construction of granular sub-base by providing close graded crushed stone aggregates of granite / trap / basalt material, mixing in a mechanical mix plant at OMC, carriage of mixed material to work site, spreading in uniform layers with motor grader on prepared surface and compacting with Plate compactor to achieve the desired density, complete as per specifications. A. Plant Mix Method. - Close graded granular sub-base material as per 400-1 For Grading- II Material (RA Attached)			
	Basic rate		2400	
	Add 10% For area weightage (Mangalore City)		240	
		Rate	2640.00	Cum
26	KSRB 4-1.6 ; Providing and laying in position plain cement concrete of Mix 1:2:4 with OPC @ 240kgs, with 20mm and down size graded granite metal coarse aggregates @ 0.878 cum and fine aggregates @ 0.53cum, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation, plinth and cills, including cost of all materials, labour, HOM curing complete as per specifications. Specification No. KBS 4.1, 4.2 (KPWD 18-19,SI No.4.6.2,Pg.No.13)			
	Basic rate		5900	
	Add 10% For area weightage (Mangalore City)		590	
		Rate	6490.00	Cum
27	KSRB-3.2: Providing and injecting chemical emulsion for Pre-constructural Anti-Termite Treatment, creating continuous chemical barrier under and around the column pits, walls, trenches, basement excavation, top surface of the plinth filling, junction of wall and floor, along the external perimeter of building, expansion joints, over the top surface of consolidated earth on which apron is to be laid, surrounding of pipes and conduits, with chloropyriphos emulsifiable concentrates of 20% concentration at 3.19 Litre/sqm., including cost of chemical, diluting in water to one percent concentration, labour, HOM complete as per specifications. (Plinth area of the building at ground floor only shall be measured) Specification No. KBS: 3.2.6 3.2.7 (KPWD 18-19,S.I. No.3.2)			
	Basic rate		105	
	Add 10% For area weightage (Mangalore City)		10.5	
		Rate	115.50	Sqm
28	KSRB 4.2.1 Providing and laying in position reinforced cement concrete of Design Mix M25 with OPC @ 340kgs, with 20mm and down size graded granite metal coarse aggregates @0.70 cum and fine aggregates @ 0.47cum, with super plasticisers@ 3 liters conforming to IS 9103-1999 reaffirmed-2008 at machine mixed, concrete laid in layers not exceeding 15 cms thick, vibrated for all works in foundation for footings, pedestals, retaining walls, return walls, walls (any thickness) including attached pilasters, columns pillars, posts, struts, buttresses, bed blocks, anchor blocks & plinths etc., including cost of all materials, labour, HOM curing, complete but excluding cost of reinforcement as per specifications. Specification No. KBS 4.1, 4.6 (KPWD 18-19,SI No.4.10,Pg.No.14)			

	Basic rate		6198	
	Add 10% For area weightage (Mangalore City)		619.8	
		Rate	6817.80	Cum
29	KSRB 4.2.7 Providing and laying in position reinforced cement concrete of design Mix M25 with OPC @ 340kgs, with 20mm and down size graded granite metal coarse aggregates @0.70cum and fine aggregates @ 0.47cum, with super plasticisers @31ts conforming to IS9103-1999 Reaffirmed-2008, machine mixed, concrete laid in layers not exceeding 15 ems thick, vibrated for all works in ground floor level for roof slabs, staircase, lintels and beams retaining walls, return walls, walls (any thickness) including attached pilasters, columns, lintles, pillars, posts, struts, buttresses, string or lacing courses, parapets, coping, bed blocks, anchor blocks, plain window cills, fillets etc., including cost of all materials, labour, HOM curing, complete but excluding cost of reinforcement as per specifications. Specification No. KBS 4.1, 4.6 (KPWD 18-19,Sl.No.4.12,Pg No.14)			
	Plinth Beam			
	Basic rate		6431	
	Add 10% For area weightage (Mangalore City)		643.1	
		Rate	7074.10	Cum
	First Floor Beam			
	Basic rate		6431	
	Lift Charges (1 x Rs.60 /Cum)		60	
	Add 10% For area weightage (Mangalore City)		649.1	
		Rate	7140.10	Cum
	Second Floor Beam			
	Basic rate		6431	
	Lift Charges (2 x Rs.60 /Cum)		120	
	Add 10% For area weightage (Mangalore City)		655.1	
		Rate	7206.10	Cum
	Terrace Floor Beam			
	Basic rate		6431	
	Lift Charges (3 x Rs.60 /Cum)		180	
	Add 10% For area weightage (Mangalore City)		661.1	
		Rate	7272.10	Cum
30	Providing and laying M25 grade RCC jacketing work around the existing column including chipping of existing column,applying epoxy as a bonding agent between old concrete and new concrete and required shuttering work,curing, including cost of all material and labour etc. Complete.(Note:Reinforcementsteel will be pais separetaly) (RA Attached)			
	Basic rate		14234.59	
	Add 10% For area weightage (Mangalore City)		1423.46	
		Rate	15658.05	Cum
31	KSRB 4-6.1 : Providing and removing centering, shuttering, strutting, propping etc., and removal of form work for foundations, footings, bases of columns for mass concrete including cost of all materials, labour complete as per specifications. Specification No. KBS 4.6.2 (KPWD 18-19,Sl.No.4.28,Pg No.16)			
	Basic rate		263	
	Add 10% For area weightage (Mangalore City)		26.3	
		Rate	289.30	Sqm
32	KSRB 4-6.7 :Providing and removing centering, shuttering, strutting, propping etc., and removal of form work for sides and soffits of beams, beam haunchings, cantilever girders, bressumers and lintels not exceeding 1m in depth including cost of all materials, labour complete as per specifications. Specification No. KBS 4.6.2 (KPWD 18-19,Sl.No.4.34,Pg No.17)			

	Ground Floor		
	Basic rate		292
	Add 10% For area weightage (Mangalore City)		29.2
		Rate	321.20 Sqm
	First Floor		
	Basic rate		292
	Add 10% For area weightage (Mangalore City)		29.2
		Rate	321.20 Sqm
	Second Floor		
	Basic rate		292
	Add 10% For area weightage (Mangalore City)		29.2
		Rate	321.20 Sqm
	Terrace Floor		
	Basic rate		292
	Add 10% For area weightage (Mangalore City)		29.2
		Rate	321.20 Sqm
33	KSRB 4-6.5 : Providing and removing centering, shuttering, strutting, propping etc., and removal of form work for columns, pillars, post and struts, square I rectangular/ polygon in plan including cost of all materials, labour complete as per specifications. Specification No. KBS 4.6.2 (KPWD 18-19,Sl.No.4.32,Pg.No.16)		
	Foundation to First Floor Slab		
	Basic rate		456
	Add 10% For area weightage (Mangalore City)		45.6
		Rate	501.60 Sqm
	First Floor Slab to Second Floor Slab		
	Basic rate		456
	Add 10% For area weightage (Mangalore City)		45.6
		Rate	501.60 Sqm
	Second Floor Slab to Roof		
	Basic rate		456
	Add 10% For area weightage (Mangalore City)		45.6
		Rate	501.60 Sqm
	Second Floor Slab to Roof		
	Basic rate		456
	Lift Charges (2 x Rs. 5)		0
	Add 10% For area weightage (Mangalore City)		45.6
		Rate	501.60 Sqm
34	KSRB 4-6.2 : Providing and removing centering, shuttering, strutting, propping etc., and removal of formwork for suspended floors, landings, balconies and likes, thickness upto 200 mm including cost of all materials, labour complete as per specifications. Specifications No. KBS 4.6.2. do- - 0 to 5 mts (KPWD 18-19,Sl.No.4.29.2,Pg.No.16)		
	First Floor		
	Basic rate		408
	Add 10% For area weightage (Mangalore City)		40.8
		Rate	448.80 Sqm
	Second Floor		
	Basic rate		408
	Add 10% For area weightage (Mangalore City)		40.8

		Rate	448.80	Sqm
	Second Floor			
	Basic rate		408	
	Add 10% For area weightage (Mangalore City)		40.8	
		Rate	448.80	Sqm
35	KSRB 4-6.11 :Providing and removing centering, shuttering, strutting, propping etc., and removal of form work for Stairs (excluding landing) except spiral staircase including cost of all materials, labour complete as per specificaliton. Specification No. KBS 4.6.2 (KPWD 18-19,Sl.No.4.38,Pg.No.17)			
	Ground Floor			
	Basic rate		561	
	Add 10% For area weightage (Mangalore City)		56.1	
		Rate	617.10	Sqm
	First Floor			
	Basic rate		561	
	Add 10% For area weightage (Mangalore City)		56.1	
		Rate	617.10	Sqm
36	KSRB 4-6.10 :Providing and removing centering, shuttering, strutting, propping etc, and removal of form work for chajja, corbels etc., including edges including cost of all materials, labour complete as per specifications. Specification No. KBS 4.6.2 (KPWD 18-19,Sl.No.4.37,Pg.No.17)			
	Ground Floor			
	Basic rate		329	
	Add 10% For area weightage (Mangalore City)		32.9	
		Rate	361.90	Sqm
	First Floor			
	Basic rate		329	
	Add 10% For area weightage (Mangalore City)		32.9	
		Rate	361.90	Sqm
37	KSRB 4-6.4 : Providing and removing centering, shuttering, strutting, propping etc., and removal of form work for vertical surface such as walls at any thickness, including attached pilasters, buttresses, plinth cills and string courses cost of all materials, labour complete as per specifications. Specification No. KBS 4.6.2			
	Basic rate		361	
	Add 10% For area weightage (Mangalore City)		36.1	
		Rate	397.10	Sqm
38	KSRB 4.9.2 : Providing T.M.T steel reinforcement for R.C.C work including straightening, cutting, bending, hooking, placing in position, lapping and l or welding wherever required, tying with binding wire and anchoring to the adjoining members wherever necessary complete as per design (laps, hooks and wastage shall not be measured and paid) cost of materials, labour, HOM complete as per specifications. Specification No. KBS 4.6.3 TMT bars Fe 500 (KPWD 18-19,Sl.No.4.46.2,Pg No.18)			
	Ground Floor			
	Basic rate		70782	
	Add 10% For area weightage (Mangalore City)		7078.2	
		Rate	77860.20	MT
	First Floor			
	Basic rate		70782	
	Lift Charges (1 x Rs.747.0)		747	

	Add 10% For area weightage (Mangalore City)		7152.9	
		Rate	78681.90	MT
	Second Floor			
	Basic rate		70782	
	Lift Charges (2 x Rs.747.0)		1494	
	Add 10% For area weightage (Mangalore City)		7227.6	
		Rate	79503.60	MT
	Third Floor			
	Basic rate		70782	
	Lift Charges (3 x Rs.747.0)		2241	
	Add 10% For area weightage (Mangalore City)		7302.3	
		Rate	80325.30	MT
39	Providing fusion bonded epoxy coating not less than 175 microns thickness and upto 300 microns to reinforcement of all diameters as per IS: 13620-1993 including testing of coating at plant The rate is inclusive of cost on account of careful handling, PVC coated binding wire instead of GI Binding wire, touch up material supplied by coating agency, repair work, loading, unloading and straightening of bent rods etc., complete as per specification and as directed by the Engineer in charge. do For 10mm to 16mm dia bars (KPWD 18-19,Sl.No.7.21.1,Pg.No.40)			
	Ground Floor			
	Basic rate		10535	
	Add 10% For area weightage (Mangalore City)		1053.5	
		Rate	11588.50	MT
40	Structural steel work riveted, bolted or welded in built up sections, trusses and framed work, including cutting, hoisting, fixing in position and applying, priming coat of approved steel primer all complete. (CPWD 2018, Sl.No.10.2, Pg.No.183)			
	Basic rate		101750	
		Rate	101750.00	MT
41	Refixing the existing Structural steel (Roof Truss) work riveted, bolted or welded in built up sections, trusses and framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer all complete (Rate Analysis)			
	Basic rate		20.4	
		Rate	20.40	KG
42	Fixing corrugated G.S. sheet roofing including vertical / curved surface fixed with polymer coated J or L hooks, bolts and nuts 8 mm diameter with bitumen and G.I. limpet washers or with G.I. limpet washers filled with white lead, including a coat of approved steel primer and two coats of approved paint on overlapping of sheets complete (up to any pitch in horizontal/ vertical or curved surfaces), excluding the cost of purlins, rafters and trusses and including cutting to size and shape wherever required. (Rate Analysis)			
	Basic rate		188	
		Rate	188.00	KG
43	Providing corrugated G.S. sheet roofing including vertical / curved surface fixed with polymer coated J or L hooks, bolts and nuts 8 mm diameter with bitumen and G.I. limpet washers or with G.I. limpet washers filled with white lead, including a coat of approved steel primer and two coats of approved paint on overlapping of sheets complete (up to any pitch in horizontal/ vertical or curved surfaces), excluding the cost of purlins, rafters and trusses and including cutting to size and shape wherever required. 1.00 mm thick with zinc coating not less than 275 gm/m ² (CPWD)			
	Basic rate		1234.25	
		Rate	1234.25	Sqm

44	KSRB 14.6: Providing and laying heavy duty cobble stones interlock pavers, using cement and course sand for manufacture of blocks of approved size, shape and colour with a minimum compressive strength of 281 kg per sqm over 50mm thick sand bed (average thickness) and compacting with plate vibrator having 3 tons compaction force thereby forcing part of sand underneath to come up in between JOints, final compaction of paver surface JOints into its final level, including cost of materials, labour and HOM complete as per specifications. Specification No. KBS KSRB 14.6-1 : do- heavy duty cobble stones 60mm thick (KPWD 18-19,Sl.No.14.6,Pg.No.103)		
	Basic rate		1056
	Add 10% For area weightage (Mangalore City)		105.6
		Rate	1161.60
			Sqm
45	Providing and laying eco-loc permeable pavers,80mm or equivalent block making machine with strong vibratory compaction, of approved size, design & shape, laid in required colour and pattern over and including 50mm thick compacted bed of coarse sand, filling the joints with line sand etc. all complete as per the direction of Engineer-in-charge.		
	Basic Rate		2073
		Rate	2073
			Sqm
46	Providing and fixing 15cm wide,45cm overall semi circular plain GS Sheet gutter with iron brackets 40 x 3mm size,bolts,nuts and washers etc, including making necessary connections with rain water pipes complete, 0.8mm thick with zinc coating not less than 275gm/m2 (CPWD 2018,Sl.No.12.7.1,Pg.No.211)		
	Basic rate		765
		Rate	765.00
			Rm
47	Providing and fixing unplasticised PVC pipes with working pressure 10 kg/sq.cm with pipe fittings, clips, making good the floor, including cost of all materials, labour charges, HOM and testing complete as per specifications. do- with 160mm outer dia KPWD 18-19,Sl.No.11.56.4,Pg.No.77		
	Basic rate		1252
	Add 10% For area weightage (Mangalore City)		125.2
		Rate	1377.20
			Rm
48	Providing and constructing Laterite size stone masonry including cost and conveyance of all materials curing etc complete as per specification. I.S. 3620/1979 having compressive strength not less then 3.5 N/mm2 for saturated dry samples. For basement in CM 1:6 (Cement 45 kgs/M3) (KPWD 2018-19,42.5.1)		
	Masonry Below Plinth		
	Basic rate		3181
	Add 10% For area weightage (Mangalore City)		318.1
		Rate	3499.10
			Cum
	Ground Floor		
	Basic rate		3391
	Add 10% For area weightage (Mangalore City)		339.1
		Rate	3730.10
			Cum
	First Floor		
	Basic rate		3391
	Lift Charges		312
	Add 10% For area weightage (Mangalore City)		370.3
		Rate	4073.30
			Cum
	For super structure in CM 1:6 (Cement 45 kgs/M3)- Second Floor (KPWD 2018-19,42.5.3)		

	Basic rate		3391	
	Lift Charges		624	
	Add 10% For area weightage (Mangalore City)		401.5	
		Rate	4416.50	Cum
49	Providing and constructing non load bearing wall with Light Weight Concrete (Autoclaved aerated concrete) Blocks confirming to IS:2185 (part-3) 1984 and IS 6441-1972 of compressive strength of 3.0N/sq mm with a thin layer of polymer based jointing solvent for super structure with necessary scaffolding, curing including cost of all materials, labour, lead & lift etc, complete as per specifications. with 600x200x150mm size Blocks (KPWD 18-19, Sl.No.6.32.2, Pg.No.31)			
	Ground Floor			
	Basic rate		1504	
	Add 10% For area weightage (Mangalore City)		150.4	
		Rate	1504.00	Sqm
	First Floor			
	Basic rate		1504	
	Lift Charges (1 x Rs.6)		6	Pg.No.31
	Sub Total		1510	
	Add 10% For area weightage (Mangalore City)		151	
		Rate	1661.00	Sqm
	Second Floor			
	Basic rate		1504	
	Lift Charges (2 x Rs.6)		12	Pg.No.31
	Sub Total		1516	
	Add 10% For area weightage (Mangalore City)		151.6	
		Rate	1667.60	Sqm
	Third Floor			
	Basic rate		1504	
	Lift Charges (3 x Rs.6)		18	Pg.No.31
	Sub Total		1522	
	Add 10% For area weightage (Mangalore City)		152.2	
		Rate	1674.20	Sqm
50	Providing and constructing non load bearing wall with Light Weight Concrete (Autoclaved aerated concrete) Blocks confirming to IS:2185 (part-3) 1984 and IS 6441-1972 of compressive strength of 3.0N/sq mm with a thin layer of polymer based jointing solvent for super structure with necessary scaffolding, curing including cost of all materials, labour, lead & lift etc, complete as per specifications. with 600x200x230mm size Blocks (KPWD 18-19, Sl.No.6.32.4, Pg.No.31)			
	Ground Floor			
	Basic rate		2066	
	Add 10% For area weightage (Mangalore City)		206.6	
		Rate	2066.00	Sqm
	First Floor			
	Basic rate		2066	
	Lift Charges (1 x Rs.6)		6	Pg.No.31
	Sub Total		2072	
	Add 10% For area weightage (Mangalore City)		207.2	
		Rate	2279.20	Sqm
	Second Floor			
	Basic rate		2066	
	Lift Charges (2 x Rs.6)		12	Pg.No.31
	Sub Total		2078	
	Add 10% For area weightage (Mangalore City)		207.8	
		Rate	2285.80	Sqm
	Third Floor			
	Basic rate		2066	
	Lift Charges (3 x Rs.6)		18	Pg.No.31

	Sub Total		2084	
	Add 10% For area weightage (Mangalore City)		208.4	
		Rate	2292.40	Sqm
51	KSRB15-3 : Providing 15mm thick cement plaster in single coat with cement mortar to brick masonry including rounding off corners wherever required smooth rendering, Providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications. do- cement mortar 1:4 (KPWD 18-19,Sl.No.15.13,Pg.No.115)			
	Ground Floor			
	Basic rate		222	
	Add 10% For area weightage (Mangalore City)		22.2	
		Rate	244.20	Sqm
	First Floor			
	Basic rate		222	
	Lift Charges (1 x Rs.6)		6	Pg.No.128
	Sub Total		228	
	Add 10% For area weightage (Mangalore City)		22.8	
		Rate	250.80	Sqm
	Second Floor			
	Basic rate		222	
	Lift Charges (2 x Rs.6)		12	Pg.No.128
	Sub Total		234	
	Add 10% For area weightage (Mangalore City)		23.4	
		Rate	257.40	Sqm
	Third Floor			
	Basic rate		222	
	Lift Charges (3 x Rs.6)		18	Pg.No.128
	Sub Total		240	
	Add 10% For area weightage (Mangalore City)		24	
		Rate	264.00	Sqm
52	KSRB15-5 : Providing rough cement plastering 15mm thick in single coat with cement mortar to brick masonry for base of dadoing works with sand of approved quality, providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications. do - cement mortar 1:6 (KPWD 18-19,Sl.No.15.31,Pg.No.117)			
	Ground Floor			
	Basic rate		194	
	Add 10% For area weightage (Mangalore City)		19.4	
		Rate	213.40	Sqm
	First Floor			
	Basic rate		194	
	Lift Charges		6	Pg.No.128
	Sub Total		200	
	Add 10% For area weightage (Mangalore City)		20	
		Rate	220.00	Sqm
	First Floor			
	Basic rate		194	
	Lift Charges		12	Pg.No.128
	Sub Total		206	
	Add 10% For area weightage (Mangalore City)		20.6	
		Rate	226.60	Sqm

53	Providing applying two coats of wall putty to inside plastered walls and ceiling using white cement putty. Scrapping and levelling the surface using steel blade and preparing the surface even and smooth by using different grade sand papers, including cost of all materials, cost of labour and scaffolding etc., complete as per the specification. (KPWD 18-19,Sl.No.15.106,Pg.No.128)			
	Ground Floor			
	Basic rate		78	
	Add 10% For area weightage (Mangalore City)		7.8	
		Rate	85.80	Sqm
	First Floor			
	Basic rate		78	
	Lift Charges (1 x Rs.6)		6	
	Add 10% For area weightage (Mangalore City)		8.4	
		Rate	92.40	Sqm
	Second Floor			
	Basic rate		78	
	Lift Charges (2 x Rs.6)		12	
	Add 10% For area weightage (Mangalore City)		9	
		Rate	99.00	Sqm
	Third Floor			
	Basic rate		78	
	Lift Charges (2 x Rs.6)		18	
	Add 10% For area weightage (Mangalore City)		9.6	
		Rate	105.60	Sqm
54	KSRB15-3 : Providing 12mm thick cement plaster in single coat with cement mortar, to ceiling including rounding off corners wherever required smooth rendering, including providing and removing scaffolding, cost of materials, labour, curing etc., complete as per specification. do- cement mortar 1:4 (KPWD 18-19,Sl.No.15.22,Pg.No.116)			
	Ground Floor			
	Basic rate		226	
	Add 10% For area weightage (Mangalore City)		22.6	
		Rate	248.60	Sqm
	First Floor			
	Basic rate		226	
	Lift Charges (1 x Rs.6)		6	
	Add 10% For area weightage (Mangalore City)		23.2	
		Rate	255.20	Sqm
	Second Floor			
	Basic rate		226	
	Lift Charges (2 x Rs.6)		12	
	Add 10% For area weightage (Mangalore City)		23.8	
		Rate	261.80	Sqm
55	KSRB15-3 : Providing 18mm thick cement plaster in single coat with cement mortar to brick masonry including rounding off corners wherever required smooth rendering, Providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications. do - cement mortar 1:4 (KPWD 18-19,Sl.No.15.16,Pg.No.116)			
	Basic rate		262	
	Add 10% For area weightage (Mangalore City)		26.2	
		Rate	288.20	Sqm

56	Providing and fixing Vitrified glazed tiles of approved make, quality & colour of size 600 x 600 x 10mm thick fixed on bed of 12mm thick cement mortar for flooring, skirting and jointed with neat cement slurry mixed with pigment to match shade of tiles, including providing spacers at required interval and removing stains, including cost of all materials, mortar, labour, etc., Complete as per specification. (KPWD 18-19,Sl.No.14.45,Pg.No.109)		
	Ground Floor		
	Basic rate	1128.00	
	Add 10% For area weightage (Mangalore City)	112.8	
	Rate	1240.80	Sqm
	First Floor		
	Basic rate	1128.00	
	Lift Charges (1 x Rs.2)	2	
	Add 10% For area weightage (Mangalore City)	113	
	Rate	1243.00	Sqm
	Second Floor		
	Basic rate	1128.00	
	Lift Charges (2 x Rs.2)	4	
	Add 10% For area weightage (Mangalore City)	113.2	
	Rate	1245.20	Sqm
	Third Floor		
	Basic rate	1128.00	
	Lift Charges (3 x Rs.2)	6	
	Add 10% For area weightage (Mangalore City)	113.4	
	Rate	1247.40	Sqm
57	KSRB 14.14-5: Providing Ceramic tiles of approved make, shade and size for flooring, treads of steps and landings laid on a bed of 12mm thick, cement mortar 1:3 mix, flush pointing with white cement using colour pigment, including cost of materials, labour, curing, complete as per specifications. for Ceramic Tiles of size 30x30cms, 6mm thick (KPWD 18-19,Sl.No.14.36.2,Pg.No.108)		
	Ground Floor		
	Basic rate	1211.00	
	Add 10% For area weightage (Mangalore City)	121.1	
	Rate	1332.10	Sqm
	First Floor		
	Basic rate	1211.00	
	Lift Charges (1 x Rs.2)	2	
	Add 10% For area weightage (Mangalore City)	121.3	
	Rate	1334.30	Sqm
	Second Floor		
	Basic rate	1211.00	
	Lift Charges (2 x Rs.2)	4	
	Add 10% For area weightage (Mangalore City)	121.5	
	Rate	1336.50	Sqm
58	KSRB 14.3 Providing and laying flooring and steps machine cut granite slabs 40mm thick on cement mortar bed 1:6, 25 mm thick, and pointed with cement mortar 1:3 over existing cement concrete bed, including cost of materials, mortar, labour, curing complete as per specifications. Specification No. KBS 14.26		
	Second Floor		
	Basic rate	2509	
	Lift Charges (2 x Rs.2)	4	
	Add 10% For area weightage (Mangalore City)	251.3	
	Rate	2764.30	Sqm

59	Providing and fixing colour glazed tiles of size 300mmx600mm for walls with borders of size 300x100mm, set in Cement Mortar 1:3 and pointed with white cement with matching colour pigment with necessary curing, cleaning including providing and removing scaffolding wherever necessary etc., complete. The work includes cost of all materials, mortar, labour charges for all items of work, hire charges for equipment etc., complete as per specification. (KPWD 18-19,Sl.No.14.64,Pg.No.112)			
Ground Floor				
	Basic rate		1213	
	Add 10% For area weightage (Mangalore City)		121.3	
		Rate	1334.30	Sqm
First Floor				
	Basic rate		1213	
	Lift Charges (1 x Rs.2)		2	
	Add 10% For area weightage (Mangalore City)		121.5	
		Rate	1336.50	Sqm
Second Floor				
	Basic rate		1213	
	Lift Charges (2 x Rs.2)		4	
	Add 10% For area weightage (Mangalore City)		121.7	
		Rate	1338.70	Sqm
60	Providing and Fixing Laterite Stone Cladding 25mm thk (polished) with an adhesive over existing cement palster surface with two coat of polish,including all lead and lifts,scaffoldingetc. and complete.			
	Basic Rate		2500.75	
	Total Rate	Rate	2500.75	Sqm
61	Providing and fixing of wall cladding using 20 mm thick gang saw water cut granite in CM 1:3 proportion cut to required shape patron with paper joint finished with cement mortar using white cement and colour pigments to match the colour of slab making through jointing with sealant, making holes 25mm x 12mm grooves in JOints including cost of all materials, mortar, labour, curing etc., complete as per specification. do- with grey granite 20mm thick gang saw with minimum width 1200 mm			
Ground Floor				
	Basic rate		2448	
	Add 10% For area weightage (Mangalore City)		244.8	
		Rate	2692.80	Sqm
First Floor				
	Basic rate		2448	
	Lift Charges (1 x Rs.2)		2	
	Add 10% For area weightage (Mangalore City)		244.8	
		Rate	2694.80	Sqm
Second Floor				
	Basic rate		2448	
	Lift Charges (2 x Rs.2)		4	
	Add 10% For area weightage (Mangalore City)		244.8	
		Rate	2696.80	Sqm
Third Floor				
	Basic rate		2448	
	Lift Charges (3 x Rs.2)		6	
	Add 10% For area weightage (Mangalore City)		244.8	
		Rate	2698.80	Sqm

62	Providing and laying platform using prepolished, water cut I gang saw 40mm thick telephonic Black Granite. laid on existing vertical -supports and fixing in CM 1:3 proportion. Including cutting to required shape, pattern with paper joints, including full rounding for nosing, finished with cement mortar, pointed with colour pigments to match the colour of slab making through jointing with sealant, making holes 25mm x 12mm grooves in JOints including cost of all materials, mortar, labour, curing etc., complete as per specification. (KPWD 18-19,Sl.No.14.52,Pg.No.110)			
	Ground Floor			
	Basic rate		3525	
	Add 10% For area weightage (Mangalore City)		352.5	
		Rate	3877.50	Sqm
	First Floor			
	Basic rate		3525	
	Lift Charges (1 x Rs.2)		2	
	Add 10% For area weightage (Mangalore City)		352.5	
		Rate	3879.50	Sqm
	Second Floor			
	Basic rate		3525	
	Lift Charges (2 x Rs.2)		4	
	Add 10% For area weightage (Mangalore City)		352.5	
		Rate	3881.50	Sqm
63	KSRB 15-15.1 • Providing and applying painting in two coats with plastic emulsion paint of approved brand on wall surface to give an even approved shade after thoroughly brushing the surface, free from mortar drops and other foreign matter including preparing the surface even and sand paper smooth, cost of materials, labour, complete as per specifications.do- with primer (KPWD 18-19,Sl.No.15.51.2,Pg No.119)			
	Basic rate		90	
	Add 10% For area weightage (Mangalore City)		9	
		Rate	99.00	Sqm
64	Providing external walls with texture finish using approved brand paint, applied uniformly in three coats over one coat of primer including cost of all materials, machineries, labour, transportation, loading and unloading, all lead and lift and all other incidental charges including scaffolding and removing stains, complete as per specifications. (KPWD 18-19,Sl.No.15.103,Pg No.127)			
	Basic rate		340	
	Add 10% For area weightage (Mangalore City)		34	
		Rate	374.00	Sqm
65	KSRB 10-3 :Providing and laying integral cement based waterproofing treatment including preparation of surface as required for treatment of roofs, balconies, terraces etc , consisting of following application. (a) Applying and grouting a slurry coat of neat cement using 2.75 kglsqm of cement admixed with proprietary water proofing compound conforming to 18:2645 over the RCC slab after cleaning the surface before treatment. (b) Laying cement concrete using broken brick bats 25mm to 100mm size with 50% of cement mortar 1:5 admixed with proprietary water proofing compound conforming 18:2645 over 20mm thick layer of cement mortar 1:5 admixed with proprietary water proofing compound to required slope and treating similarly the adjoining walls upto 300mm height including rounding off junctions of walls and slabs. (c) After two days of proper curing, applying a second coat of cement lurry admixed with proprietary water proofing compound (d) Finishing the surface with 20mm thick joint less cement mortar of mix 1:4 admixed with proprietary water proofing compound and finally finishing the surface with trowel and neat cement slurry and making of 300x300mm square. (e) The whole terrace so finished shall be flooded with water for a minimum period of two weeks for curing and for final test including cost of materials, labour complete as per specifications. (KPWD 18-19,Sl.No.10.2,Pg.No.68)			
	Basic rate		1011	
	Add 10% For area weightage (Mangalore City)		101.1	

		Rate	1112.10	Sqm
66	Waterproofing of RCC Terrace I podium slab I toilet I utilities I water retaining structure by preparing the surface by chipping and cleaning and Grouting of Honey comb, voids, cracks I construction joints with cement slurry (1kg cement added in 10 ltr of water) added with 100gm of inorganic accelerator, followed by spraying of liquid biological modified alkaline earth silicates@ 040 ltr per sqm on whole surface to reduce the micro porosity and allowing it to dry, curing the surface for the silicates to penetrate deeper into the concrete and spraying waterproofing impregnate liquid containing silane and silanollinear copolymer@ 0.50 ltr per sqm and finally applying polymer slurry made out of cross linked acrylic I styrene I butadiene & cement in the ratio of 1:0.1, @ 0.50kglsgm on the whole surface, including all labour charges tools and equipments, all complete as per the specification (KPWD 18-19,Sl.No.10.5.1,Pg.No.69)			
	Basic rate		526	
	Add 10% For area weightage (Mangalore City)		52.6	
		Rate	578.60	Sqm
67	KSRB 9.4-1 : Providing wood frames of doors, windows, clerestory windows, ventilators and other frames, wrought, framed or assembled including making plaster groves (excluding cost of cement concrete and side clamps), but including cost of materials, labour, HOM complete as per specifications. Specification No. KBS 9.33KSRB 9.4-3 : -do - Mathi I Nandi wood frames (KPWD 18-19,Sl.No.9.12,Pg.No.53)			
	Basic rate		102143	
	Add 10% For area weightage (Mangalore City)		10214.3	
		Rate	112357.30	Cum
68	KSRB 9.5 : Providing and fixing in position fully panelled wood shutters for doors, with styles and rails of 40mm. thick with bottom and lock rails 180mm wide top rail and styles 100mm wide as per drawing and panels of 25mm thick including cost of materials, labour, HOM complete as per specifications. (excluding cost of fixtures) Specification No. KBS 9.34KSRB 9-6.3 :do- MathiiNandi wood styles and rails of 35mm thick (KPWD 18-19,Sl.No.9.19,Pg.No.53)			
	Basic rate		5016	
	Add 10% For area weightage (Mangalore City)		501.6	
		Rate	5517.60	Sqm
	First Floor			
	Basic rate		5016	
	Lift Charges (1 x Rs. 4/Sqm)		4	
	Add 10% For area weightage (Mangalore City)		502	
		Rate	5522.00	Sqm
	Second Floor			
	Basic rate		5016	
	Lift Charges (2 x Rs. 4/Sqm)		8	
	Add 10% For area weightage (Mangalore City)		502.4	
		Rate	5526.40	Sqm
	Third Floor			
	Basic rate		5016	
	Lift Charges (3 x Rs. 4/Sqm)		12	
	Add 10% For area weightage (Mangalore City)		502.8	
		Rate	5530.80	Sqm

69	SOLID PANEL PRELAM PVC DOOR SHUTTER Providing & fixing 30mm thick factory made rigid foam Prelam Panelled Door Shutters made from M.S. tube of 19x19mm, 19 gauge for styles and 15x15mm for top & bottom rails, covered with heat moulded Prelaminated PVC C Channel of 5mm thick sheet & 30x50mm wide to form styles & 5mm thick & 75mm wide Prelaminated PVC Sheets for top rail, lock rail & bottom rail on either side & 5mm thick, 20mm wide cross PVC sheet as gap insert for top rail & bottom rail, Panelling of 5mm thick PVC sheet Prelaminated on either side fitted in the M.S. frame, Sealed to the styles & rails with PVC Designer beading on either side & joined together with solvent cement adhesive etc., Complete as per manufacturers specification & direction of Engineer-in-charge fixed to frames with 3 nos of 75mm. Aluminium hinges.do- with both side prelam (KPWD 18-19,Sl.No.9.85,Pg No.60 & 61)			
	Basic rate		3746	
	Add 10% For area weightage (Mangalore City)		374.6	
		Rate	4120.60	Sqm
	Basic rate		3746	
	Lift Charges (1 x Rs. 4/Sqm)		4	
	Add 10% For area weightage (Mangalore City)		375	
		Rate	4125.00	Sqm
	Basic rate		3746	
	Lift Charges (2 x Rs. 4/Sqm)		8	
	Add 10% For area weightage (Mangalore City)		375.4	
		Rate	4129.40	Sqm
70	Providing and fixing pre fabricated non-monolithic R.C.C. Door Frames factory manufactured in separate parts and assembled at bolt nuts system with mechanical table vibrating as per IS 6523-1983 with using M25 concrete as per IS 456 with a cross section of 60 mm x 100 mm reinforced with 1.70 kg of TMT steel reinforced with 3 Nos. of 6 mm dia Main TMT bars and 6 mm Dia TMT stirrups welded at 40 em c/c in triangle shape per meter length of door frames, including cost of steel and fabrication charges having 3/4 No. Stainless Steel hinges plate attachment made of 165 mm x 25 mm x 2.5 mm Stainless Steel Flat welded with required iron rods and flats with drilling for fixing flat CSK Head Machine screws and nut made out of 304 grade stainless steel screws, nut and MS square nut of size 8 x 8 square and length 10 mm and making necessary provision in concrete for fixing aldrops, tower bolts and hold fasts etc., complete including two coats of oil based enamel primer providing without cill for shutter thickness upto 30 mm, 21 days tank immersed curing including cost of labour, materials, HOM etc., complete excluding the cost of door Fixtures as per the direction of Engineer (KPWD 18-19,Sl.No.9.98,Pg.No.63 & 64)			
	Basic rate		891	
	Add 10% For area weightage (Mangalore City)		89.1	
		Rate	980.10	Rmt
	Basic rate		891	
	Lift Charges (1 x Rs. 4/Sqm)		4	
	Add 10% For area weightage (Mangalore City)		89.5	
		Rate	984.50	Rmt
	Basic rate		891	
	Lift Charges (2x Rs. 4/Sqm)		8	
	Add 10% For area weightage (Mangalore City)		89.9	
		Rate	988.90	Rmt
71	Providing and fixing Single shutter glass door of 12mm thick plain toughened glass. The door is fixed by using any approved make hardware fitting like patch fitting, pivot, floor machine, locking arrangements and suitable SS door rails with floral glass etching for 1/3 portion of door area etc complete. The rate includes cost of all materials, labour, hire of tools & machineries, and as per specification.			
	Basic rate		8935	
	Add 10% For area weightage (Mangalore City)		893.5	

		Rate	9828.50	Sqm
72	Providing and fixing of Louvered ventilator made out of multi chambered UPVC (Matching to RAL-9016) sections and with minimum TiO2 (Titanium Dioxide) at 6PHR with TPV (Thermo plastic Vulcanized) and lead free with gaskets -grey colour having isolated drainage and reinforced with Galvanized Iron profile throughout the ventilator frame.The frame having overall size of 39mm x 39mm with GI reinforcement of 1mm thickness.Louver Clip in Aluminium (Powder Coated in white) will be used on the frame along with plastic parts of fixing the 4mm pin head glass.Wall thickness of frame shall be 2mm.Maximum possible size - 1000mm x 1000mm (KPWD 18-19,Sl.No.38.44.2,Pg.No.308)			
	Basic rate		3632	
	Add 10% For area weightage (Mangalore City)		363.2	
		Rate	3995.20	Sqm
73	Providing and fixing 304- grade stainless steel hand rails of 14-gauge pipes for Ramps staircase made out of stainless steel hallow pipes, using 50mm dia for verticals @1.60 mtr c/c fixed to the ramps or steps by drilling with bolts and 100mm dia MS base plates 10mm gauge for fixing of Vertical pipes 4 - Nos anchor bolts & 40mm dia pipes fixed horizontally for 2-rows top, one pipes fixed with vertical pipes another one fixed with elbows and 25mm dia pipes are fixed horizontally for 2-rows below top measure@ equal intervals including cutting, welding, bending wherever necessary with suitable caps @ tops, bottoms & corners finishing with mat l shining etc., complete including cost and conveyance of all materials, labour for all items of work, HOM with all lead and lift, loading and unloading, transportation charges and all other incidental charges etc., complete as per specification and directions of the Engineer-in-charge of the work. Ramps or Staircase for physically challenged. (KPWD 18-19,Sl.No.7.39,Pg.No.45)			
	Basic rate		5373	
	Add 10% For area weightage (Mangalore City)		537.3	
		Rate	5910.30	Sqm
74	Providing and fixing M.S. Hand railing for Balcony/Staircase etc., with 50mm dia. M.S. hollow pipe of 14 gauge, welded to 20mmx20mm M.S. square rod placed vertically, spaced at 100mm at regular intervals of 600mm. These vertical rods laterally tied to 3 horizontal rods spaced at equal interval. These assembly is fixed to concrete by using expansion bolts and welding the same to reinforcement bars and making good the surface. All the joints and sections should be cut to length, welded and grinded wherever necessary etc., complete. The work includes cost of all materials, labour charges for all items of work, hire charges for welding, cutting and grinding equipment, and electricity charges, etc., complete as per specification and drawing.			
	Basic rate		2840	
	Add 10% For area weightage (Mangalore City)		284	
		Rate	3124.00	Sqm
75	Providing and fixing anchor bolts as specified in RCC Drawings (KPWD 18-19,Code No.0764)			
	Basic Material Rate		40	
	Add 10% Labour Charges for Fixing		4	
		Rate	44.00	Kg
76	KSRB 8.7-5 : Providing and fixing in position 12mm thick plaster of paris (Gypsum anhydrous) for ceiling reinforced with hessian cloth flat surface with ceiling tiles up to a height of 5 m above floor level over aluminium strips 25mm x 6mm and rendered smooth with plaster of paris including cost of materials, labour, curing complete as per specifications. KPWD 18-19,Sl.No.8.24			
	Basic Rate		1167	
	Add 10% For area weightage (Mangalore City)		116.7	
		Rate	1283.7	Sqm

77	<p>KSRB 1.11 : Providing and fixing in position aluminium windows and ventilators as per approved drawings with sliding shutters using three track window frame of size 92x31.75mm bottom section 1.3mm thick, weight 1.07kg/m; sides and top sections 1.3 mm, thick, weight 0.933 kg/m. shutter frame section comprising top and bottom section of size 40mmx18mm, wall thickness 1.25mm. weight 0.417 kg./m. shutter side outer 40mmx18mm. wall thickness 1.25mm. weight 0.417 kg/m, shutter interlock section 40mmx26. 7mm wall thickness 1.1 mm. thick, weight 0.469 kg/m, the shutters mounted on nylon rollers with approved quality of fixtures such as aluminium handles tower bolts etc.; providing and fixing 5.5mm. thick plain glass for shutters fitted with rubber beading all aluminium sections including cutting to required length, joints mitred subdividing the frame tenoned and rivetted, in the assembled frame, stiffened with end clips for corners, angles etc., and fixed to the walls, lintels, floor beams/cills as the case may be, with necessary steel screws, raul plugs or teak wood gatties including cutting masonry or concrete and making good the original surface using cement mortar. do- using aluminium section anodized to 12- 15 microns.</p>			
	Ground Floor			
	Basic Rate		4350	
	Add 10% For area weightage (Mangalore City)		435	
		Rate	4785	Sqm
	First Floor			
	Basic Rate		4350	
	Lift Charges (1 x Rs.6 / sqm)		6	
	Add 10% For area weightage (Mangalore City)		435.6	
		Rate	4791.6	Sqm
	Second Floor			
	Basic Rate		4350	
	Lift Charges (2 x Rs.6 / sqm)		12	
	Add 10% For area weightage (Mangalore City)		436.2	
		Rate	4798.2	Sqm
78	<p>Providing , fabricating, assembling and fixing in position Aluminium partition using 101.60mm x 44.45mm x 3.18mm aluminium, mat finish or glossy finish , anodized sections combination of plain, single groove and double groove members should not exceed 0.60mc/c and bottom member of required lengths, joints mitred and corner grinded sub dividing assembled frame should be stiffened with corner angles. Stripped and fixed with screws rawl plug and teakwood guttas to RCC column or masonry on sides. RCC lintels or beams at top and mosaic floor at bottom; including cutting chistelling and making good with cement mortar to match the surface . Providing and fixing 12mm. thick prelaminated sheet (Ecoboard - exterior grade) of approved colour for bottom panel of maximum height 0.9m, and 5.50 mm thick plain or pin headed glass for middle panel and top panel with glazing clips pi 19.05mm.x17.30mm.1.00mm.</p>			
	<p>All the aluminium sections used should be treated for removal of any rust and prevention of further rust formation and coated with greasy materials for non adherence of mortar or any other sticky materials: The vertical members should be embedded in the flooring by making suitable size holes and fixing with cement mortar. All the frame should be thoroughly cleaned free from rust, scale or dirt. work should be carried out as per direction of engineer-in-charge of the work with all lead and lift as per Chief Architect's drawing etc., complete to a degree of perfection. do- using aluminium section powdered coated to a minimum of 60-70 microns with exterior durable pure polyester grade powder of approved quality.</p>			
	Basic Rate		2600	
	Add 10% For area weightage (Mangalore City)		260	
		Rate	2860	Sqm
79	<p>Providing and Fixing Handcarving Cornice and Bracket made up of Burma Wood as per the drawings and as instructed by Architect.</p>			
	Basic Rate (Market Rate)		6994	
		Rate	6994	Sqm

80	Providing precast cement concrete Jali 1:2:4 (1 cement : 2 coarse sand(zone-III) : 4 graded stone aggregate 6mm nominal size), reinforced with 1.6 mm dia mild steel wire, including centering and shuttering, roughening cleaning, fixing and finishing in cement mortar 1:3 (1 cement: 3 fine sand) etc. complete, excluding plastering of the jambs, sills and soffits. 50 mm thick (CPWD 2018,Sl.No.5.18.1,Pg.No.98)			
	Basic Rate		1474.05	
		Rate	1474.05	Sqm
81.01	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). The weight of aluminium extruded section shall be taken for purpose of payment.			
	Basic Rate (Market Rate)		370.45	
		Rate	370.45	Kg
81	Double Glazing Grid: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: (a) 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:			
	Basic Rate		2949.3	
		Rate	2949.30	Sqm
81	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 strengthened 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.25.2) 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. (i) 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.			
	Basic Rate		3250.95	
		Rate	3250.95	Sqm
82	Providing and Fixing SS 304 Outdoor Dustbin(Pivoted Type and Mounted on SS Poles) of 55 liters capacity all complete to the satisfaction of the Engineer in charge. (NON SOR Item)			
	Basic rate		7500	
	Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.14	Rate	7500.00	Nos.

83	Road Marking with hot applied Thermoplastic Compound with Reflectrising Glass Beads on Concrete Surface:Providing and laying of hot applied thermoplastic compound 2.5mm thick including reflectorising glass beads at 250 gms and 2 ltr of primer per sqm area,thickness of 2.5mm is exclusive of surface applied glass beads as per IRC:35.The finished surface to be level,uniform and free from streak and holes complete as per specifications.MORTH specification No.803 (KPWD 18-19,SI No : 24.15)			
	Basic Rate		429	
	Add 10% For area weightage (Mangalore City)		42.9	
		Rate	471.90	Sqm
84	Fabricating, providing and erecting in poiston of M S Ornamental security Grill Gate/Fencing on compound wall without hot dip using 75 x 12mm M S Flat for alround frame work with verticals at the centre and horizontal centere support M S Square of 20 x20 mm of different heights as shown in the drawing are to be fixed at 16 cms C/C for suqare bars of full height and at 8cms C / C for bottom rods providg ornamental C I Designers at the botom and C I arrows inthe midle and top. The entire frame work is to be fixed by means of expansion bolts to the brick pillars with necesary drilling holes. the work includes providng two coats of enamel painting over one coatr of red lead ready mix primer coat etc complete cost of all labour, painting, erection charges using hoist pulleycranes with all lead and lift, loading, transporting and unloading using hoist pulley cranes, scaffolding charges and all other incidental charges required for successful completion fo the work as per specification and drawings(KPWD 18-19,Pg.N0.41,SI.No.7.31)			
	Basic rate		149	
	Add 10% For area weightage (Mangalore City)		14.9	
		Rate	163.90	KG
85	Providing and Fixing SS Steel Chairs as specified by Architect.			
	Basic Rate		9000	
		Rate	9000.00	Nos.
86.00	P/F FRP Water gully cover with frame (25T) 600mmx500 mm on SWD (Rate analysis attached)			
	Basic Rate		10765	
	Discount 30%		-3229.5	
	Sub Total		7535.5	
	Fixing Charges @5%		376.775	
		Rate	7912.28	Nos.
87	Providing and fixing of S.S. Bollards(SS304) on footpath as specified and directed by Engineer -in-charge (NON SOR Item)			
	Basic Rate		4500	
	Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.13	Rate	4500.00	Nos.
88	Supplying and Fixing Passanger elevator of 8 Person Capacity of approved make and as per directed by Engineer in charge. (CPWD Plinth Area Basis Rate-2019)			
	Basic Rate		1600000	
		Rate	1600000.00	Nos.
89	Extra Lead for Disposing off unserviceable materials upto 10 Km beyond initial Lead of 5km Item No 17.4 KSRRB M100-4.1-Debris			
	Debris	2.0x1.30x10Km		
	Baisc rate		26.00	
	Add Loading and unloading charges(Item No 17.1 KSRRB M100-1)		57.00	

	Sub Total		83.00	
	Add 10% For area weightage (Mangalore City)		8.3	
		Rate	91.30	Cum
90	Extra Lead for Disposing off unserviceable materials upto 10 Km beyond initial Lead of 5 km Item No 17.4 KSRRB M100-4.1-Earth			
	Earth	2.0x1.28x10km		
	Baisc rate		25.60	
	Add Loading and unloading charges(Item No 17.1 KSRRB M100-1)		57.00	
	Sub Total		82.60	
	Add 10% For area weightage (Mangalore City)		8.26	
		Rate	90.86	Cum

**Assistant Engineer
MSCL Mangaluru**

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MSCL Mangaluru**

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MSCL Mangaluru**

**General Manager Technical
MSCL Mangaluru**

BOQ of Softscape of UPOR

Sr.No.	Specifications	Unit	Quantity	Rate	Amount	Remarks
1.1	SOIL MIXES and Ground Preparation					
1.1.1	Supplying and stacking of good earth at site including royalty and carriage upto 5 k.m. lead complete (earth measured in stacks will be reduced by 20% for payment). (Non SOR Item)	Cum	312.35	140.00	43,729	
1.1.2	KSRRB M300-Supply at site of work well decayed farm yard manure KSRRB M300-11. Supply at site of work well decayed farm yard manure, from any available source, approved by the engineer in charge including screening and stackin complete as per specifications. MORTH Specification No. 308.2(Page No.152,SI.No.19.90)	Cum	153.85	224.40	34,523	
1.1.3	KSRRB M300-Horticulture KSRRB M300-Spreading of sludge farm yard manure or/ and good earth KSRRB M300-1. Spreading of sludge farm yard manure or/ and good earth in required thickness (cost of sludge, farm yard manure or/and good earth to be paid for separately) complete as per specifications. MORTH Specification No. 307 (KPWD SR 16-17,Page No.150,SI No.19.77)	Cum	466.20	113.30	52,820	
1.1.4	Mixing earth and sludge or manure in the required proportion specified or directed by the Officer-in-charge (Non SOR Item)	Cum	466.20	23.91	11,147	
1.1.5	Soil preparation of Lawn					
	KSRRB M300-3.Making lawns including ploughing and breaking of clod,removal of rubbish,dressing and supplying doobs grass roots and planting at 15 cm apart,including supplying and spreading of farm yard manure at rate of 0.18cum per 100 sqm complete as per specifications. MORTH Specification No.307 (KSRRB 19.80)	Sqm	777.00	17.60	13,675	
1.2	Tree and Turf					
1.2.1	ZOYSIA JAPONICA (MAT) (Non SOR Item)	Sqm	777.00	156.80	1,21,834	
1.2.1	KSRRB M300- 8.1. Planting and Maintaining of Flowering Plants and Shrubs -A) Planting flowring plants and shrubs in central verge MORTH Specification No. 307	Rm	300.00	50.60	15,180	
1.2.2	KSRRB M300-9. Planting of trees by the road side (Avenue trees) in 0.60 m dia holes, 1 m deep dug in the ground, mixing the soil with decayed farm yard/sludge manure, planting the saplings, backfilling the trench, watering, fixing the tree guard and maintaining the plants for one year complete as per specifications. MORTH Specification No. 307 KSRRB M300-Renovation lawns including,weeding,forking the ground, top dressing with forked soil	Nos.	60.00	115.50	6,930	
Total					2,99,838	

**Assistant Engineer
MSCL Mangaluru**

**Assistant Executive Engineer
MSCL Mangaluru**

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MSCL Mangaluru**

**General Manager Technical
MSCL Mangaluru**

Measurement Sheet of Softcase-UPOR

Sr.No.	Item	Unit	No.	L	B	H	Qty.
1.1	SOIL MIXES and Ground Preparation						
1.1.1	Supplying and stacking of good earth at site including royalty and carriage upto 5 k.m. lead complete (earth measured in stacks will be reduced by 20% for payment). (Non SOR Item)						
	Landscape Area 1	Cum	0.67	104.00		0.60	41.81
	Landscape Area 2	Cum	0.67	36.00		0.60	14.47
	Landscape Area 3	Cum	0.67	6.00		0.60	2.41
	Landscape Area 4	Cum	0.67	11.00		0.60	4.42
	Landscape Area 5	Cum	0.67	45.00		0.60	18.09
	Landscape Area 6	Cum	0.67	35.00		0.60	14.07
	Landscape Area 7	Cum	0.67	14.00		0.60	5.63
	Landscape Area 8	Cum	0.67	48.00		0.60	19.3
	Landscape Area 9	Cum	0.67	171.00		0.60	68.74
	Landscape Area 10	Cum	0.67	20.00		0.60	8.04
	Landscape Area 11	Cum	0.67	17.00		0.60	6.83
	Landscape Area 12	Cum	0.67	20.00		0.60	8.04
	Landscape Area 13	Cum	0.67	118.00		0.60	47.44
	Landscape Area 14	Cum	0.67	25.00		0.60	10.05
	Landscape Area 15	Cum	0.67	107.00		0.60	43.01
	Consider 2/3rd Qty of Item No.1.1.7	Cum					312.35
1.1.2	KSRRB M300-Supply at site of work well decayed farm yard manure KSRRB M300-11. Supply at site of work well decayed farm yard manure, from any available source, approved by the engineer in charge including screening and stackin complete as per specifications. MORTH Specification No. 308.2(Page No.152,Sl.No.19.90)						
	Landscape Area 1	Cum	0.33	104		0.6	20.59
	Landscape Area 2	Cum	0.33	36		0.6	7.13
	Landscape Area 3	Cum	0.33	6		0.6	1.19
	Landscape Area 4	Cum	0.33	11		0.6	2.18
	Landscape Area 5	Cum	0.33	45		0.6	8.91
	Landscape Area 6	Cum	0.33	35		0.6	6.93
	Landscape Area 7	Cum	0.33	14		0.6	2.77
	Landscape Area 8	Cum	0.33	48		0.6	9.50
	Landscape Area 9	Cum	0.33	171		0.6	33.86
	Landscape Area 10	Cum	0.33	20		0.6	3.96
	Landscape Area 11	Cum	0.33	17		0.6	3.37
	Landscape Area 12	Cum	0.33	20		0.6	3.96
	Landscape Area 13	Cum	0.33	118		0.6	23.36
	Landscape Area 14	Cum	0.33	25		0.6	4.95
	Landscape Area 15	Cum	0.33	107		0.6	21.19
	Consider 1/3rd Qty of Item No.1.1.7	Cum					153.85

Sr.No.	Item	Unit	No.	L	B	H	Qty.
1.1.3	KSRRB M300-Horticulture KSRRB M300-Spreading of sludge farm yard manure or/ and good earth KSRRB M300-1. Spreading of sludge farm yard manure or/ and good earth in required thickness (cost of sludge, farm yard manure or/and good earth to be paid for separately) complete as per specifications. MORTH Specification No. 307 (KPWD SR 16-17,Page No.150,SI No.19.77)						
	Landscape Area 1	Cum	1	104		0.6	62.40
	Landscape Area 2	Cum	1	36		0.6	21.60
	Landscape Area 3	Cum	1	6		0.6	3.60
	Landscape Area 4	Cum	1	11		0.6	6.60
	Landscape Area 5	Cum	1	45		0.6	27.00
	Landscape Area 6	Cum	1	35		0.6	21.00
	Landscape Area 7	Cum	1	14		0.6	8.40
	Landscape Area 8	Cum	1	48		0.6	28.80
	Landscape Area 9	Cum	1	171		0.6	102.60
	Landscape Area 10	Cum	1	20		0.6	12.00
	Landscape Area 11	Cum	1	17		0.6	10.20
	Landscape Area 12	Cum	1	20		0.6	12.00
	Landscape Area 13	Cum	1	118		0.6	70.80
	Landscape Area 14	Cum	1	25		0.6	15.00
	Landscape Area 15	Cum	1	107		0.6	64.20
						Total	466.20
1.1.4	Mixing earth and sludge or manure in the required proportion specified or directed by the Officer-in-charge (Non SOR item)						
	Consider Same Qty. of 1.1.7	Cum					466.20
1.1.5	Soil preparation of Lawn						
	KSRRB M300-3.Making lawns including ploughing and breaking of clod,removal of rubbish,dressing and supplying doobs grass roots and planting at 15 cm apart,including supplying and spreading of farm yard manure at rate of 0.18cum per 100 sqm complete as per specifications. MORTH Specification No.307 (KSRRB 19.80)						
	In rows 5 cm apart in both directions						
	Landscape Area 1	Sqm	1	104.00			104.00
	Landscape Area 2	Sqm	1	36.00			36.00
	Landscape Area 3	Sqm	1	6.00			6.00
	Landscape Area 4	Sqm	1	11.00			11.00
	Landscape Area 5	Sqm	1	45.00			45.00
	Landscape Area 6	Sqm	1	35.00			35.00
	Landscape Area 7	Sqm	1	14.00			14.00
	Landscape Area 8	Sqm	1	48.00			48.00
	Landscape Area 9	Sqm	1	171.00			171.00
	Landscape Area 10	Sqm	1	20.00			20.00
	Landscape Area 11	Sqm	1	17.00			17.00

Sr.No.	Item	Unit	No.	L	B	H	Qty.
	Landscape Area 12	Sqm	1	20.00			20.00
	Landscape Area 13	Sqm	1	118.00			118.00
	Landscape Area 14	Sqm	1	25.00			25.00
	Landscape Area 15	Sqm	1	107.00			107.00
						Total	777.00
1.2	ZOYSIA JAPONICA (MAT) (Non SOR Item)						
	Landscape Area 1	Sqm	1	104			104.00
	Landscape Area 2	Sqm	1	36			36.00
	Landscape Area 3	Sqm	1	6			6.00
	Landscape Area 4	Sqm	1	11			11.00
	Landscape Area 5	Sqm	1	45			45.00
	Landscape Area 6	Sqm	1	35			35.00
	Landscape Area 7	Sqm	1	14			14.00
	Landscape Area 8	Sqm	1	48			48.00
	Landscape Area 9	Sqm	1	171			171.00
	Landscape Area 10	Sqm	1	20			20.00
	Landscape Area 11	Sqm	1	17			17.00
	Landscape Area 12	Sqm	1	20			20.00
	Landscape Area 13	Sqm	1	118			118.00
	Landscape Area 14	Sqm	1	25			25.00
	Landscape Area 15	Sqm	1	107			107.00
						Total	777.00
1.2.1	KSRRB M300- 8.1. Planting and Maintaining of Flowering Plants and Shrubs -A) Planting flowering plants and shrubs in central verge MORTH Specification No. 307	Rm	1	300			300.00
1.2.2	KSRRB M300-9. Planting of trees by the road side (Avenue trees) in 0.60 m dia holes, 1 m deep dug in the ground, mixing the soil with decayed farm yard/sludge manure, planting the saplings, backfilling the trench, watering, fixing the tree guard and maintaining the plants for one year complete as per specifications. MORTH Specification No. 307 KSRRB M300- Renovation lawns including,weeding,forking the ground, top dressing with forked soil	Nos.	60				60.00

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MSCL Mangaluru**

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MSCL Mangaluru**

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MSCL Mangaluru**

**General Manager Technical
MSCL Mangaluru**

Rate Analysis-Softscape-UPOR

1.1.1	Supplying and stacking of good earth at site including royalty and carriage upto 5 k.m. lead complete (earth measured in stacks will be reduced by 20% for payment). (Non SOR Item)			
	Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.27	Rate	140.00	Cum
1.1.2	KSRRB M300-Supply at site of work well decayed farm yard manure KSRRB M300-11. Supply at site of work well decayed farm yard manure, from any available source, approved by the engineer in charge including screening and stackin complete as per specifications. MORTH Specification No. 308.2(Page No.152,SI.No.19.90)			
	Basic rate		204	
	Add 10% For area weightage		20.4	
		Rate	224.40	Cum
1.1.3	KSRRB M300-Horticulture KSRRB M300-Spreading of sludge farm yard manure or/ and good earth KSRRB M300-1. Spreading of sludge farm yard manure or/ and good earth in required thickness (cost of sludge, farm yard manure or/and good earth to be paid for separately) complete as per specifications. MORTH Specification No. 307 (KPWD SR 16-17,Page No.150,SI No.19.77)			
	Basic rate		103	
	Add 10% For area wightage		10.3	
		Rate	113.30	Cum
1.1.4	Mixing earth and sludge or manure in the required proportion specified or directed by the Officer-in-charge (Non SOR item)			
	Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.28	Rate	23.91	Cum
1.1.5	KSRRB M300-3.Making lawns including ploughing and breaking of clod,removal of rubbish,dressing and supplying doobs grass roots and planting at 15 cm apart,including supplying and spreading of farm yard manure at rate of 0.18cum per 100 sqm complete as per specifications. MORTH Specification No.307 (KSRRB 19.80)			
	Basic rate		16	
	Add 10% For area wightage		1.6	
		Rate	17.60	Sqm
1.2	TURF			
1.2.1	ZOYSIA JAPONICA (MAT) (Non SOR Item)			
	Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.32	Rate	156.80	Sqm
1.2.1	KSRRB M300- 8.1. Planting and Maintaining of Flowering Plants and Shrubs -A) Planting flowring plants and shrubs in central verge MORTH Specification No. 307			
	Basic rate		46	
	Add 10% For area wightage		4.6	
		Rate	50.60	Rm

1.2.2	KSRRB M300-9. Planting of trees by the road side (Avenue trees) in 0.60 m dia holes, 1 m deep dug in the ground, mixing the soil with decayed farm yard/sludge manure, planting the saplings, backfilling the trench, watering, fixing the tree guard and maintaining the plants for one year complete as per specifications. MORTH Specification No. 307 KSRRB M300-Renovation lawns including,weeding,forking the ground, top dressing with forked soil			
	Basic rate		105	
	Add 10% For area wightage		10.5	
		Rate	115.50	Nos.

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Bill of Quantity Electrical works (UPOR)

S.No	Ref.	No.	Description of Item	Unit	QTY	Rate (Rs) Rate	Amount
	SOR	PWD					
1			LT Panels				
			Fabrication, inspection at works Supply, installation, testing & commissioning of following readymade distribution boards, double door, IP 42 degree protection complete with necessary, MCB isolators , MCBs, earth leakage circuit breaker (ELCB) etc including interconnections with appropriate capacity size of PVC insulated copper conductor wires (ISI marked),suitable for concealed mounting /wall mounting with MS frame work of 40 x 40 x 5 mm MS angle iron, with M.S. enclosure fabricated out of min 16 SWG thick M.S. CRCA sheet with concealed hinged door, locking arrangement etc. including earthing clamps for both incoming & outgoing circuits, interconnections, per phase isolation kit as required,cable end box & wire way box if required, continuous copper earth wire in the wire way box with single/duplicate brass earthing terminals, danger board, name plate, flexible earthing for the door, metal treatment & powder coated painting, Phase Distribution drawing etc. all as per drawings (G.A. & fabrication drawing to be got approved), etc. relevant IS & instruction of Engineer-in-charge.				
			Note:				
			1.MCBs shall be minimum 10 KA breaking capacity (Type –C)				
			2. Blanking Plates shall be included in scope of work.				
			3. DB shall be of standard readymade type as per catalouge No. from approved manufacturers as indicated in preferred makes of material.				
			4. Wire way & cable end box also end & locking plates shall be provided.				
			5. Routine tests will be conducted at factory in presense of user as per relevant IS.				
			All Electrical component should have IS mark				
1.1			Main LT Panel	Set	1	35750.0	35750
			Incomer				
			1 Nos. 100 Amps TPN MCCB of fault breaking capacity 25KA (Ics=Icu)				
			BUSBARS SECTIONS				
			100 amps FP, 25kA, 480volts grade busbar chamber of suitable length with Al busbars. All busbars and interconnections shall be of suitable size Al busbar, current density of bus-bars shall not be more than 0.8 Amps/ sq.mm cross sectional area of Bus Bar.				
			OUTGOING				
			2 Nos. Of 63 A TPN MCB				
			1 Nos. Of 40 A TPN MCB				
			1 Nos. Of 25 A TPN MCB				
			1 Nos. Of 16 A TPN MCB				
			1 Nos. Of 63 A TPN MCB as SPARE				
			2 Nos. Of 40 A TPN MCB as SPARE				
1.2			EXTERNAL LIGHTING PANEL	Set	2	52014.0	104028
			Incomer				
			1 Nos. 32 Amps TPN MCB				
			BUSBARS SECTIONS				
			50 amps FP, 25kA, 480volts grade busbar chamber of suitable length with Al busbars. All busbars and interconnections shall be of suitable size Al busbar, current density of bus-bars shall not be more than 0.8 Amps/ sq.mm cross sectional area of Bus Bar.				
			OUTGOING				
			5 Nos. Of 16 A TPN MCB				
			3 Nos. Of 16 A TPN MCB as SPARE				
			Total Cost of LT Panels (Rs.)				139778
2			Distribution Board				
2.1	6.17		Supplying and fixing regular MCB distribution boards on wall/wood board / flushh mouning using required clamps, bolt, nuts etc. with provision for fixing suitable type capacity MCB's single phase / 3 phase / single goor with powder ciated painting. Made out of 14 SWG MS enclosure.				
			III - Double Door				
2.1.1	6.17.8		6Way TP & N	Nos.	1	2867.0	2867
2.1.2	6.17.9		8Way TP & N	Nos.	1	3585.0	3585
2.1.3	6.17.10		12Way TP & N	Nos.	2	5138.0	10276

S.No	Ref.	No.	Description of Item	Unit	QTY	Rate (Rs)	Amount
	SOR	PWD				Rate	
2.2	6.16		Supplying & fixing miniature circuit breakers on existing MCB distribution boards using necessary fixing materials and "C" Type curve, indicator ON/OFF, energy cross-3 with short circuit breaking capacity of 10K and complete wiring as required confirming to IEC 60898				
2.2.1	6.16.1		5-32Amps SP	Nos.	114	418.0	47652
2.2.2	6.16.5		5-32Amps TPN	Nos.	1	1547.0	1547
2.2.3	6.16.6		40-63Amps TPN	Nos.	3	1936.0	5808
2.3	6.18		Supplying fixing and wiring Earth Leakage Miniature Circuit Breaker (ELMCB) 240/450V upto 300mA sensitivity on existing wood/panel board.				
2.3.1	6.18.2		16-25 Amps 2Pole	Nos.	1	2412.0	2412
2.3.2	6.18.2		32-40 Amps 2Pole	Nos.	3	2623.0	7869
2.4.1	6.42.1 , 6.44.6		63A TPN ISOLATOR	Nos.	1	5396	5396
2.4.2	6.42.1 , 6.43.4, 6.44.6		40A TPN ISOLATOR	Nos.	1	7010	7010
Total Cost of Distribution Board (Rs.)							94422
3			LT Electrical Cable				
			LT Cable				
3.1	7.4		Supplying and laying the following XLPE insulated 1.1 KV grade, FRLS (outer sheath only), armoured/flexible and overall sheathed copper/aluminium conductor cables made to IS: 7098 (Part-I) 1988.				
3.1.1	7.4.7		3.5C x 50sq.mm Al Arm Cable	Mtr	80	265.0	21200
3.1.2		PWD 7-2-34	Supplying, erecting & terminating XLPE armoured cable 4 core 16 sq. mm. copper conductor continuous 5.48 sq. mm. (12 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/ pole or laid in provided trench/ pipe as per specification no. CB-LT/CU	Mtr	50	734.0	36700
3.1.3		PWD 7-2-32	Supplying, erecting & terminating XLPE armoured cable 4 core 6 sq. mm. copper conductor continuous 5.48 sq. mm. (12 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/ pole or laid in provided trench/ pipe as per specification no. CB-LT/CU	Mtr	160	336.0	53760
3.1.4		PWD 7-2-31	Supplying, erecting & terminating XLPE armoured cable 4 core 4 sq. mm. copper conductor continuous 5.48 sq. mm. (12 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/ pole or laid in provided trench/ pipe as per specification no. CB-LT/CU	Mtr	1050	251.0	263550
3.2			LT Cable Termination				
3.2.1	7.14		Supplying and fixing of heavy duty cable glands suitable for UG cable of 1.1KV class (metal only)				
	7.14.3		32mm dia 2.5mm thick	Each	1	122.0	122
3.2.2	7.21		Supplying tinned copper lugs and crimping and wiring to terminal point for wire of the following sizes.				
	7.21.6		16 sqmm	Each	1	11.3	11.31
	7.21.9		50 sqmm Long barrel	Each	3	62.4	187.2
			Cable Laying				
3.3	7.8		Labour charges for laying of 1.1KV class UG cable in existing trench/GI pipe/ stoneware pipe/ on wall/ on pole as required.				
			in existing trench/duct				
3.3.1	7.8.1		6 to 16 sqmm	Mtr	1000	10.8	10800
3.3.2	7.8.2		25 to 75 sqmm	Mtr	60	16.2	972
			on wall structure				
3.3.3	7.8.6		6 to 16 sqmm	Mtr	100	31.0	3100
3.4	7.9		Digging of trench of 0.6m deep X 0.5 m wide refilling the trench to the required ground level and consolidating etc., complete (As per Civil SR KSRB i-2, P-7)				
3.4.1	7.91		In soil (ordinary)	Mtr	400	78.0	31200

S.No	Ref.	No.	Description of Item	Unit	QTY	Rate (Rs) Rate	Amount
	SOR	PWD					
			Total Cost of LT Cable (Rs.)				4,21,603
4			Networking & Telecommunication				
4.1	11.1		Supply & Drawing UTP-CAT6E LAN Cable	Rmt	500	23.00	11500
4.2	11.4		Supply & Fixing of switch mounting rack with power manager & Cable manager				
4.2.1	11.4.2		9U with 450mm depth	Nos	1	6593.00	6593
4.3	11.9		Supply fixing of Network Switches				
4.3.1	11.9.1		48 Port Gigabyte (Manageble)	Nos.	1	34815.00	34815
4.4	11.10		Supplying & fixing of I/O socket with box				
4.4.1	11.10.2		Double I/O	Nos.	1	590.00	590
4.5	11.11		Supplying & fixing ofmtr Cat6 Patch cable				
4.5.1	11.11.3		3mtr	Nos.	52	337.00	17524
4.6	11.12		Supply & fixing of Patch panel for LAN cabling				
4.6.1	11.12.1		48 Port 10/100 patch Panel	Each	1	13082.00	13082
4.7	11.2		Supplying and drawing PVC flexible one pair telephone unarmoured tinned copper cables				
4.7.1	11.2.2		2 Pair	Mtr	120	13.00	1560
			Crone Box				
4.8	Non SOR Item		30 Pair Crone Box	1	1	1000.00	1000
			Total Cost of LT Cables (Rs.)				86,664
5			UPS				
5.1			Supply, installation, testing and commissioning of ON - line UPS system with Batteries for 1/2 hour backup. UPS capacity:- 1 Nos. x 20 kVA.-PRS mode 3Ph-3Ph. with Batteries 6 x 80Ah volt and other accesories to complete the job	Nos	1	400000	400000
			Total Cost of UPS (Rs.)				4,00,000
6			Cable Tray & Raceway				
6.1			Cable trays				
	7.19.1		Supplying & fixing 2mm thick galvanized perforated tray with powder coated paint on exixting MS angle support using necessary GI bolts/nuts and washer or welding as required.				
6.1.1	7.19.1		150 X 50 mm	Mtr	30	440.0	13200
6.1.2	7.19.2		300 X 50 mm	Mtr	10	547.0	5470
6.2			Raceways				
			Raceways & Accessories				
			Supply and installation of single or multi compartment GI raceway of cross section given below laid in floor complete as specified. a) Raceway b) All bends, joints, supports, end plates couplers earth conductivity.				
6.2.1			300 x 50 Double compartment	Rmt	20	1215.0	24300
6.2.2			150 x 50 Single compartment	Rmt	100	590.0	59000
			Providing and fixing of 2 mm thick pregavanised sheet outlet junction box including providing cover with provision to adjust overall height, knock outs on four sides to accept raceways of specified sizes and cutouts to fix required outlets for following size of race ways.				
6.2.3			300 mm wide x 40 mm deep raceway with 3/2/1 compattments	Nos	4	2500.0	10000
6.2.4			150 mm wide x 40 mm deep single compartment raceway	Nos	8	2000.0	16000
			Total Cost of Cable Tray & Raceway (Rs.)				1,27,970
7			Light Fixture				

S.No	Ref.	No.	Description of Item	Unit	QTY	Rate (Rs) Rate	Amount
	SOR	PWD					
7.1	4.33		Supply of 2'x2' LED recessed luminaire with... Watts system wattage. Housing shall be with pressure die cast aluminum alloy with corrosion proof resistant polyester power coated. Driver operates with voltage range from 100V to 270V 50/60 Hz with short circuit, overload & mis-wiring protection. Lumen maintenance of 70% at 50000Hrs. Injection moulded polycarbonate diffuser for better mwchanical stability, light transmission & avoid pot hole effect. Junction temp. shall be <70 degree Celsius. Driver is on constant current driver @0.06A with PF > 0.92 with line voltage @ 220-240V @ 50/60Hz, driver efficiency > 85% & THD <15%. LED Efficiency > 130lm/W at 1W & fixture efficiency >75lm/W with CRI >75 with injection moulded polycarbonate lens with <80mm depth. 5years Warranty against any manufacturing defect working under standard electrical condition.				
7.1.1	4.33.2		LED modulear down light 2' x 2' -36watts	Each	31	8242.0	255502
7.2	4.32		Supply of LED square recessed downlighter with 18 W system wattage. Housing shall be with powder coated pressure die cast aluminium alloy with corrsion resistant polyester powder coat & with extended heat sink. Diffuse/cover made of lexan plastic material. rated life shall be L70 @ 50000 Hrs ehich shall has inbuilt electrical protection like over/under voltage, short circuit, overload, open circuit & miswiring. Driver is in constant current driver output driver at 0.06A with PF> 0.9 with line voltage at 220-240V @ 50/60Hz, driver efficiency > 85% & THD <15%. LED Efficiency > 130 lm/W at 1 W & fixture efficiency > 75 lm/W with CRI > 75 with injection moulded polycarbonate lens. 5years Warranty against any manufacturing defect working under standard electrical condition.	Each	32	4945.0	158240
7.3	4.31		Supply of recess mounted rolling tpye LED square or round downlighter 12 Watts with 4/6W GU 10 LED Lamp Rib fabricated from Die cast Iron aluminium with white powder coated prewired to mains connector with suitable driver & having swiveling unit of aluminium die cast eye ball & LED lamp position retained by circular wire spring. 5years Warranty against any manufacturing defect working under standard electrical condition.	Each	8	1868.0	14944
7.4			11W Bulkhead				
7.5		PWD 2-2-5	Supplying and erecting bulkhead fitting suitable for upto LED upto 12W fixed on wall. As per specification no. FG-IDF/BHF	Nos.	3	221.0	663
7.6			70 W LED COB Downlighter for Extra high ceiling	Nos	4	5985.0	23940
7.7	4.37		Supplying of LED floodlight withW system power consumption pressure die cast aluminum housing with powder coating with IP 65 protection 1, 200-275V voltage with electronic driver, PF>0.9, should meet ANSI 2G vibration test, compliance to UL/CE with class I. System rating shall be 50K hrs @ Lumen maintenance of 70% system efficiency>80l/w. Over load & short circuit protection ensure relianble operation in spite of problem in output side. Compliance to IS 10322/IEC60598, LM 79 & LM 80 Adherence with RoHS, UL approved MCPCB. Top access street light with single screw to ensure ease of maintenance at the sight site location with minimized minimal tools. Light fixture with ... W system power consumption. LED efficiency > 130lm/W at 1W & fixture efficiency > 80lm/w with nominal CRI > 75. Luminaire manufacture should have in-house facility accredited by NABL/CPRI & any government certified agency & design & development facility certified by ISO 9001:2008. Housing with supplier word mark / name shall be Engraved / Embossing on the die cast housing / body part. Warranty of 5 years against any manufacturing defect working under standrd electrical conditions as				
7.7.1	4.37.1		LED Floodlight 60W	Nos	2	7129.0	14258
7.8			Supply, installation, testing & commissioning of LED weatherproof street light fixture suitable for mounting on suitable dia pipe at any angle between lateral(side entry) and vertical(top mounted), prewired with led driver for 240V, 50Hz single phase AC supply, compliant to IP 65 protection grade, and all other necessasary components and accessories to finish the job.	Nos.			
			40W LED light fixture	Nos.	40	2931	117240
	5.14		Fabricating, supply, erection of ___mtr long hot dip galvanized Octagonal pole with BSEN 10025 grade S 355 jo steel plate shaft IS 2062 for base plate with door opening arrangement , including suitable boards, Bachelite sheet and MCB as per IS specification and suitable to withstand wind speed of 47 m/sec for ___mtr pole in single section and single joint welded as per IS 9595/IS 10178 AWS having dimension bottom ___mm and top ___ mm with 3 mm thick, suitable base plate and 4 nos of long J bolt along with templet and the pole shall be hot dip galvanized in single dipping with not less than 65 micron as per ASTM -A123 and 153 etc. excluding foundation as per drawing 7 meter- top 70 mm and bottom 130 mm dia (SOR Item No - 5.14, 5.14.1)				

S.No	Ref.	No.	Description of Item	Unit	QTY	Rate (Rs) Rate	Amount
	SOR	PWD					
	5.14.5		7 meter - Top 70mm and bottom 130mm dia	Nos.	40	12420	496800
	5.18		Supplying and fixing of hot deep Galvanized M.S.Bracket suitable for outdoor luminaries and mounted on Octogonal pole using necessary bolt, nuts etc., complete.				
	5.18.1		Single arm Bracket with 1000mm standard 40/50mm dia	Nos.	40	1919	76760
7.9			Bollard Lights				
			Supply,installation,testing & commissioning of LED Bollard lights prewired with led driver operated on 240V, 50Hz single phase AC supply, compliant to IP 66 protection grade and with all other necessasary components and accessories to finish the job.				
			(For GardenLighting)				
7.9.1			10 - 12W LED light fixture	Nos.	34	2205	74970
			Total Cost of Light Fixture (Rs.)				12,33,317
8			Point Wiring, Switch Sockets & Accesories				
8.1	1		OPEN CONDUIT SYSTEM				
	1.1		Supply heavy gauge PVC conduit pipe ... dia ... mm thick confirming to IS 2509 with suitable size bends, junction boxes, adhesive paste etc., and fixing using inverted wood plugs in case of RCC ceiling and RCC wall / stone structure or rawl plugs in case of brick walls and cement plastering the damaged portion using heavy gauge saddles at an interval of 700mm using NF screws				
8.1.1	1.1.2		25mm dia 2mm thick	Mtr	200	70.0	14000
8.1.2	1.1.3		32mm dia 2.5mm thick	Mtr	100	100.0	10000
	1.2		Supply heavy gauge PVC conduit pipe ... dia ... mm thick confirming to IS 2509 with suitable size bends, junction boxes, adhesive paste etc., and running before concreting the slab. The conduit should be tied to the reinforcement rods by using binding wires and unused ways of junction boxes and pipe ends should be covered using PVC and enclosures, run with 18SWG GI fish wire wherever necessary				
8.2.1	1.2.2		25mm dia 2mm thick	Mtr	100	57.0	5700
8.2.2	1.2.3		32mm dia 2.5mm thick	Mtr	100	90.0	9000
8.3	2		POINT WIRING USING COPPER WIRE				
	2.5		Wiring for light/power circuit using one of FRLS PVC insulated 1100V grade, multistanded copper with low conductor resistance single core in open or concealed system of wiring with specified IS-694:1990 & confirming to GTP of GROUP-A.				
8.3.1	2.5.2		1.5 sqmm	Mtr	2200	18.6	40920
8.3.2	2.5.3		2.5 sqmm	Mtr	1400	29.2	40880
8.3.3	2.5.4		4 sqmm	Mtr	1100	42.1	46310
8.4			SWITCH, SOCKETS & ACCESSORIES				
			Switch, socket , data & telephone points				
	3.5		Supply and flush mounting powder coated/ galvanised metal box suitable for mounting modular switch plated. The box should be firmly flush mounted after due groove cutting in Brick/Stone/C.C wall				
8.4.1	3.5.1		1-3 Way	Each	31	91.0	2821
8.4.2	3.5.3		6 Way	Each	108	121.0	13068
	3.6		Supply and fixing superior quality modular switch mounting polycarbonate plate with necessary supporting back plate with required nos. of machine screws, bolts nuts etc., complete on the the existing metal/PVC box				
8.5.1	3.6.1		1 to 3 Module	Each	31	109.0	3379
8.5.2	3.6.3		6 Module	Each	108	173.0	18684
	3.7		Supply and fixing of modular switch/ socket/ stepped electronic fan regulator/ dimmer/ telephone socket etc on existing modular switch plate as per IS 3854 & IS 1293				
8.6.1	3.7.1		6 amp one Way	Each	5	63.0	315
8.6.2	3.7.3		6 amp 3Way Socket	Each	5	95.0	475
8.6.3	3.7.7		16 Amp one way switch	Each	109	114.0	12426
8.6.4	3.7.10		6/16 Amps Universal Socket	Each	109	147.0	16023
8.6.5	3.7.11		TV / Telephone Socket	Each	26	82.0	2132
8.6.6	3.7.12		RJ45/IO Outlet	Each	26	204.0	5304

S.No	Ref.	No.	Description of Item	Unit	QTY	Rate (Rs)	Amount
	SOR	PWD				Rate	
			Total Cost of Point Wiring, Switch Sockets & Accesories(Rs.)				2,41,437
9			Earthing				
			GI EARTHING				
9.1		DSRE 5.2	Earthing with G.I. earth pipe 4.5 metre long, 40 mm dia including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe etc. with charcoal/ coke and salt as required.	Each	14	5308.0	74312
9.2		DSRE 5.6	Earthing with copper earth plate 600 mm X 600 mm X 3 mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 metre long etc. with charcoal/ coke and salt as required.	Each	2	11794.0	23588
9.3		DSRE 5.9	Supplying and laying 25 mm X 5 mm G.I strip at 0.50 metre below ground as strip earth electrode, including connection/ terminating with G.I. nut, bolt, spring, washer etc. as required. (Jointing shall be done by overlapping and with 2 sets of G.I. nut bolt & spring washer spaced at 50mm)	Metre	500	131.0	65500
9.4		DSRE 5.8	Supplying and laying 25 mm X 5 mm copper strip at 0.50 metre below ground as strip earth electrode, including connection/ terminating with nut, bolt, spring, washer etc. as required. (Jointing shall be done by overlapping and with 2 sets of brass nut bolt & spring washer spaced at 50mm)	Metre	40	853.0	34120
9.5	7.22		Supplying and running GI/Copper conductor for grounding and (along with other wires in conduit ssystem of wiring) using necessary suitable size clamps, nails, guttas/spacers, etc.				
			GI wire				
9.6	7.22.3		8 SWG	Mtr	150	19.5	2925
			Total Cost of Earthing(Rs.)				2,00,445
			Total Cost of Electrical Services(Rs.)				29,45,636

OPERATION AND MAINTENANCE FOR 2 YEARS		
YEAR	O and M	Remarks
First Year (Electrical +PAS+FAS)	33168	Consider 1% of total electrical cost
Second Year (Electrical +PAS+FAS)	35158	Consider 6% on First Year Cost
GRAND TOTAL	68,325	

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PUBLI ADDRESSABLE SYSTEM AND ACCESSORIES

Item	Description	Unit	Qty.	Unit Price (Rs)		
				Rate	Amount	
	PUBLI ADDRESSABLE SYSTEM AND ACCESSORIES					
2.0	Supply, Installation, testing and commissioning of 6W Ceiling Speaker with max 1M/1W 96DB . Frequency response of 80Hz-20KHz with a dispersion angle of 160 deg.	No	13	1780	23,140	17.3.3 - DSRE
3.0	Supply, Installation, testing and commissioning of 15W Wall mount Horn Speaker	No	2	10132	20,264	17.3.8 - DSRE
4.0	Supply, Installation, testing and commissioning 2Core, 1.5 sq. mm Screened Multi-Stranded, Bare Copper Conductor, PVC Insulated cable as per IS 694-1990	Mtr	350	51	17,850	17.5.3.1 - DSRE
5.0	Supplying heavy gauge PVC conduit pipe below mention mm dia and thick conforming to IS 2509 with suitable size bends, metal/PVC junction boxes, adhesive paste etc. and running before concreting the slab. The conduit should be	Mtr.	200	70	14,000	1.1.2 - DSRE
	Total Carried to Summary				75,254	

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FIRE ALARM SYSTEM

Item				Description	Unit	Qty.	Rate	Amount
	PWD SOR Sr.No.	Banglore SOR Sr.No.	CPWD SOR Sr.No.	FIRE ALARM AND DETECTION SYSTEM				
				Supply, installation, testing and commissioning of following as per specifications and Drawing:				
1			17.2.13	Supplying, installation, testing & commissioning of intelligent addressable duct detector including suitable Photo detector complete with base as required.	Nos.	25	7801	195025
2			17.2.5	Supplying, installation, testing & commissioning of response indicator on surface/recessed MS Box having two LED, metallic cover complete with all connections etc as required.	Nos.	7	263	1841
3			17.2.9	Supplying, installation, testing & commissioning of intelligent addressable thermal detector with rate of rise cum fixed temperature thermistor complete with base as required.	Nos.	1	2713	2713
4			17.2.14	Supplying, installation, testing & commissioning of addressable manual call point complete as required.	Nos.	3	3859	11577
5			17.2.6	Supplying, installation, testing & commissioning of intelligent addressable programmable sounder complete as required.	Nos.	3	2638	7914
6			17.2.16	Supplying, installation, testing & commissioning of addressable strobe complete as required.	Nos.	3	3354	10062
7				Supplying and fixing of following sizes of PVC conduit alongwith the accessories in surface/recess including cutting the wall and making good the same in case of recessed conduit as required.				
8		1.3.2		Supplying and erecting UPVC conduit 25 mm in dia. conforming to I.S. with required number of couplings, PVC bushes, check nuts etc. complete.	RM	300	58	17400
9			17.5.2	Supplying & laying of 2x1.5 sqmm fire alarm armoured cable, 600/1000V rated with annealed copper conductor having XLPE insulation, steel wire armouring & FRLS outer sheath complete as required.	RM	350	141	49350
				Total Carried to Summary				2,95,882

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Summary For HVAC, PHE & FF Services for UPOR Project			
Sr. No.	Description	Estimated Rate (Rs.)	Operation & Maintenance cost for 2 years
1	HVAC	9,53,093	75,000
2	PHE	7,27,049	48,000
3	FF	23,940	18,000
	TOTAL COST (Rs)	17,04,082	1,41,000
	Taxes will be additional		

Assistant Engineer
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UPOR, Manglore Smart City						
Bill Of Quantity For Fire-Fighting Services						
Sr. No.	Reference	Description of Items	Unit	Qty.	Supply and Installtion	Supply and Installtion Amount
					Rate	
1		Fire extinguisher				
	P.W.D (Manglore Circle) 2018-19 . SI No. 40.3	Supplying and erecting ABC Dry Chemical Powder type Fire extinguisher 4 kg capacity cartridge tyB with gun metal cap 150 gram CO2 gas cartridge powder and brackets conforming to IS 2171-1985 and complete erected with necessary clamps made from 50x6mm MS flat with nuts and bolts grouted in wall complete	Nos.	5	4788	23,940
Total Cost of Fire Fighting Services (Rs)						23,940

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UPOR, Mangaluru Smart City						
Bill Of Quantity For PHE Services						
Sr. No.	Reference	Description of Items	Unit	Qty	Supply and Installation	Supply and Installation Amount
					Rate	
1		SANITARYWARE & FITTINGS				
1.1	P.W.D (Mangalore Circle) 2018-19 SI No. 12.5	Providing and fixing white vitreous china clay, water closet European type (Pedestal type, P-trap) with black solid plastic seat and lid, C. P brass hinges, rubber buffers. 10 litre low level, PVC flushing cistern (all are approved make) with fittings, C. I I M.S brackets, 40mm diameter flush bend with fittings and clamps, overflow arrangements with special and 25mm mosquito proof coupling of approved design, painting of fittings and brackets, cutting and rmaking good the wall and floor wherever required, including cost of materials, labour complete as per specifications.	Nos.	8	4956	39648
1.2	D.S.R 2018 (C.P.W.D) (Vol 2) Item No. 18.49.1	Providing and fixing C.P. brass bib cock of approved quality conforming to IS:8931				
		15 mm nominal bore	Nos.	8	418.95	3351.6
1.3	P.W.D CIVIL (Gov. of Maharashtra) 2018-19 Item No. 48.29	Providing and fixing Hand shower (health faucet) with 8mm dia. 1m long flexible tube having wall hook with approved make including necessary sockets/ union nut etc. complete as directed by Engineer in charge.	Nos.	8	1677	13416
1.4	P.W.D (Mangalore Circle) 2018-19 SI No. 12.25	Providing and fixing white vitreous china clay, flat back wash basin size 550x400mm with a pair of 15mm C.P brass pillar taps with C.I I M .S brackets, 32 mm C. P. brass waste of standard pattern, painting of fittings and brackets, cutting and making good the wall and floor wherever required, including cost of materials, labour complete as per specifications				
		size 550 x 400mm	Nos.	8	3879	31032
1.5	BWSSB SOR 2016-17 .Section 19 SI No. 33	Providing vitreous china clay toilet paper holder with a pack of papers as per specification	Nos.	8	414	3312
1.6	Market rate	Supplying and fixing of UPVC WC connector (straight or bend type) with rubber lip ring. Including 110 mm dia UPVC pipe of required length and proper connection complete as required.	Nos.	8	864	6912
1.7	P.W.D (Mangalore Circle) 2018-19 SI No. 13.80	Providing gun metal pillar cocks 15mm dia of I class conforming to ISI specifications and fixing them in position as per directions including of cost of materials and fixtures and conveyance to spot	Nos.	4	242	968
1.8	D.S.R 2018 (C.P.W.D) (Vol 2) Item No. 17.69.1	Providing and fixing PTMT Waste Coupling for sink, of approved quality and colour. Waste coupling 31 mm dia of 79 mm length and 62mm breadth weighing not less than 45 gms	Nos.	8	99.75	798
1.9	D.S.R 2018 (C.P.W.D) (Vol 2) Item No. 17.22A	Providing and fixing CP Brass 32mm size Bottle Trap of approved quality & make and as per the direction of Engineer-in-charge.	Nos.	8	883.05	7064.4
1.1	P.W.D (Mangalore Circle) 2018-19 SI No. 12.39	Providing and fixing 600x450mm bevel Lead edge mirror of superior glass with 6mm hard board backing and fixed to wooden cleats with C.P screws, washers, including cost of materials, labour complete as per specifications.	Nos.	8	1157	9256
1.1	BWSSB SOR 2016-17 .Section 19 SI No. 49.2	Providing and fixing liquid soap glass dispenser and holder as per design.	Pair	8	145	1160
2		INTERNAL WATER SUPPLY SYSTEM				
2.1	P.W.D (Mangalore Circle) 2018-19	Providing and fixing Chorinated Poly-Venyl Chloride (CPVC) pipes conforming to IS 15778, having thermal stability for hot and cold water supply including all CPVC plain and brass threaded fittings including fixing the pipe with clamp at 1.00 mtr spacing. This includes jointing of pipes and fittings with one step CPVC solvent cement & the cost of cutting chases & making good the same including testing of joints complete as per specifications.. (Concealed work including cutting chases and good the walls etc.)				
	SI No. 13.86.1	15mm nominal OD pipes	Rmt	62	206	12772
	SI No. 13.86.2	20mm nominal OD pipes	Rmt	5	235	1175
	SI No. 13.86.3	25mm nominal OD pipes	Rmt	56	293	16408
	SI No. 13.86.4	32mm nominal OD pipes	Rmt	30	374	11220

Sr. No.	Reference	Description of Items	Unit	Qty	Supply and Installation	Supply and Installation Amount
					Rate	
2.2	P.W.D (Manglore Circle) 2018-19	Providing and fixing gun metal wheel valve conforming to IS specification of approved make as per directions including all lead and lift etc., complete.				
	SI No. 13.79.1	15mm dia	Nos.	2	395	790
	SI No. 13.79.2	20mm dia	Nos.	2	414	828
	SI No. 13.79.3	25mm dia	Nos.	12	447	5364
	SI No. 13.79.4	32mm dia	Nos.	12	486	5832
	SI No. 13.79.5	40mm dia	Nos.	8	562	4496
	SI No. 13.79.6	50mm dia	Nos.	4	734	2936
					0	0
2.3	C.P.W.D, D.S.R & A.O.R 2019, For Wet Riser & Sprinkler System Code No. 11	Supplying, fixing, testing and commissioning of butterfly valve of PN 1.6 rating with bronze/gunmetal seat duly ISI marked complete with nuts, bolts, washers, gaskets conforming to IS 13095 of following sizes as required :				
		40 mm	Set		3509	0
		50 mm	Set	6	3671	22026
		65 mm	Set	1	4149	4149
2.4	C.P.W.D, D.S.R & A.O.R 2019, For Wet Riser & Sprinkler System Code No. 14	Providing, installation, testing and commissioning of non-return valve of following sizes conforming to IS: 5312 complete with rubber gasket, GI bolts, nuts, washers etc.as required :				
		40 mm	Set		5646	0
		50 mm	Set	4	2800	11200
2.5		Providing, installation, testing and commissioning of Gun metal Y-strainer fabricated out of 1.6 mm thick stainless steel, Grade 304, sheet with 3 mm dia holes with stainless steel flange				
	Market rate	50 mm	Each	2	3200	6400
2.6	P.W.D ELECTRICAL (Gov. of Maharashtra) 2018-19 Item No. 13-7-14	Supplying and installing pressure gauge of 100 mm dia., 0-300 PSI or 0-14 kg per cm square fitted with 12/15 mm dia. pad cock valve, and G.I. pipe, elbow etc. complete as per specification no. FF-FFA/PG	Each	2	657	1314
2.7	P.W.D (Manglore Circle) 2018-19	Providing and fixing in position brass ball valve high or low pressure with plastic float of approved quality nominal bore including cost of all materials, labour and HOM with all leads complete as per specifications.				
	SI No. 13.42	25 mm dia nominal	Nos.	5	513	2565
2.8	P.W.D (Manglore Circle) 2018-19 SI No. 40.89	Supplying Installing, testing and commissioning of Gun metal AIR RELEASE VALVE SIZE OF 25mm dia including cost of materials, labour, HOM complete as per specifications.	Nos.	4	1875	7500
		Providing & fixing PVC Vent Cowl				
		110 mm	Nos.	2	450	900
		65 mm	Nos.	2	320	640
3		EXTERNAL WATER SUPPLY SYSTEM				
3.1	P.W.D (Manglore Circle) 2018-19	Providing and fixing in trenches galvanised IS 1239 C class pipe nominal bore with all fittings (earth work in trenches to be measured and paid for separately) including cost of all materials, labour charges, HOM of equipments and testing complete as per specifications.				
	SI No. 13.15	50 mm dia	Rmt	22	388	8536
3.2	P.W.D (Manglore Circle) 2018-19 SI No. 13.22	Providing and fixing water meter with stop cock, jam nut, socket in G. I pipe line including cutting and threading the pipe and making long screws including cost of all materials, labour, HOM and testing complete as per specifications.	Set	1	1320	1320
4		INTERNAL DRAINAGE SYSTEM				
4.1	Market Rate	Providing and fixing SWR pipes 6 kg/sq.cm B class working pressure with pipe fittings, support, including cost of all materials, labour charges, HOM of equipment and testing complete as per specifications. IS 13592				
		do- with 110mm outer dia	Rmt	65	750	48750
		do- with 160mm outer dia	Rmt	50	1150	57500
###	Market Rate	Providing and fixing SS Nahani trap of approved make conforming to ISI specifications and construction of Cistern in M15 as directions (Rate is inclusive of cost of materials and fixtures and conveyance of materials to work spot).				
		12.5 cms x 7.5 cms	Each	4	1120	4480

Sr. No.	Reference	Description of Items	Unit	Qty	Supply and Installation	Supply and Installation Amount
					Rate	
4.3	Market Rate	Supplying & Fixing in position 100 mm dia UPVC Multi traps of self cleaning design including 125 mm dia brass C.P. grating, jointing, embedding in concrete etc. complete. Rate to include making of opening in floor, marble / tiles, for fixing C.P gratings, extension connector as required, complete.	Nos.	9	1520	13680
4.4	Market Rate	Providing and fixing PVC Gully Trap as per specification 300 X 300	Nos.	3	1150	3450
5		EXTERNAL DRAINAGE SYSTEM				
5.1		Inspection Chamber				
	Market Rate	Constructing brick masonry inspection chamber internal dimensions 450x450mm, (clear inside dimension) for pipeline with three or more inlets, using table moulded non-modular bricks of class designation 50 in cement mortar 1*5, C. I cover with frame (Heavy duty) total weight of cover with frame to be not less than 125 kg (weight of cover 23kg and weight of frame 15 kg) R.C.C. top slab with cement concrete M 15 with 20mm and downsize granite metal , foundation concrete M 5 with 40mm and downsize granite metal inside plastering 12mm thick with cement mortar 1:3, finished smooth with a floating coat of cement on walls and bed concrete complete as per standard design including cost of materials, labour charges, curing complete as per specifications. (Depth up to 600- 1500 mm)	Nos.	1	8900	8900
	Market Rate	Constructing brick masonry inspection chamber internal dimensions 450x900mm, (clear inside dimension) for pipeline with three or more inlets, using table moulded non-modular bricks of class designation 50 in cement mortar 1*5, C. I cover with frame (Heavy duty) total weight of cover with frame to be not less than 125 kg (weight of cover 23kg and weight of frame 15 kg) R.C.C. top slab with cement concrete M 15 with 20mm and downsize granite metal , foundation concrete M 5 with 40mm and downsize granite metal inside plastering 12mm thick with cement mortar 1:3, finished smooth with a floating coat of cement on walls and bed concrete complete as per standard design including cost of materials, labour charges, curing complete as per specifications. (Depth up to 600- 1500 mm)	Nos.	6	12500	75000
5.2		Water Tank				
	P.W.D CIVIL (Gov. of Maharashtra) 2018-19 Item No. 42.53	Providing and fixing H.D.P container Syntex or alike one piece moulded water tank made out of high density polythylar and built corrugated inclusive of delivery up to destination hoisting and fixing of accessories such as inlet,outlet overflow pipe inclusive of all tanks capacity				
		Capacity- 5000 ltr	Unit	1	60000	60000
5.3		Pumps				
	Market Rate	Supply, installation, testing & commissioning of Submersible pumps (1 working + 1 standby) with 10 mm thick solid handling capacity. C.I body with built in strainer & SS 304 impeller, coupled to motor suitable for operation on 430 V 3 pH 50 Cycle A/C power supply and lifting arrangement including complete as required.				
		Automatic Electric control panel with change over switch, relays, electrical wiring, cabling from panel to pumps, level controller complete with all accessories as per manufacturer specifications				
		Accessories like NRV's valves on discharge and valve and strainer in suction line, header for suction and delivery side, required cut pieces of pipes, fittings, flanges, pressure gauge, base frame and concrete foundation complete as required.				
		Flow rate : 3 LPS (1 Working +1 Standby)	Nos.	2	105000	210000
		Head : 35 Mts				
		Purpose : Water Transfer from UGT to OHT				
		Location : Underground Tank				
Total Cost of PHE Services (Rs)						7,27,049

Assistant Engineer
MSCL Mangaluru

Assistant Executive Engineer
MSCL Mangaluru

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MSCL Mangaluru

General Manager Technical
MSCL Mangaluru

UPOR, Manglore Smart City						
Bill Of Quantity For HVAC Services						
Sr. No.	Reference	Description of Items	Unit	Qty.	Supply and Installtion Rate	Supply and Installtion Amount
1		Variable Refrigerant Flow system				
1.1		VRF UNIT				
	DSR VRF/VRV Air Conditioning - 2019 (CPWD)	Supply, Installation, Testing & Commisioning of modular type Variable Refrigerant Volume Air Cooled Outdoor Units suitable for cooling and heating, having all hermetically sealed inverter type scroll compressor, minimum two compressors for above 14HP modules , microprocessor based controller , top discharge type condensing units , with R 410A refrigerant , vibration isolators with suitable foundation etc. complete as required. The unit shall deliver the rated capacity at AHRI Conditions & work even at 50 ° C ambient temperature without tripping. The unit shall be suitable to work on 400V +/- 10%, 3 Phase, 50Hz AC power supply. The unit shall be filled with first charge of refrigerant and ready for use as required. The COP at AHRI conditions shall not be less than 3.1 and EER not less than 6.5.				
	Item No. 1	10 HP outdoor unit	Nos.	1	164150	164150
1.2	DSR VRF/VRV Air Conditioning - 2019 (CPWD)	Supply,installation,testing andcommissioning of following minimum capacity 4 way flow VRV/VRV Cassette Type Indoor ceiling mounted unit equipped with synthetic washable media pre-filter, fan section with low noise fan/dynamically balanced blower,multi speed motor, coil section with DX Copper coil, electronic expansion valve,outer cabinet, drain pump,grill, necessary supports, vibration isolation, cordless remote controletc.,suitable for operation on single phase 230V±10%, 50HzAC supply, complete, as required.The units shall have automatic force shutdown provision in case of fire on receiving signal from BMS System. The cooling capacity of indoor unit will be at air inlet conditions of 27Degree C DB and 19 Degree C WB temperature.				
	Item No. 2.6	2.4 TR	Nos.	4	31453	125812
1.3	Government of Maharashtra P.W.D(Electrical Wing) C.S.R 2018-19 . Item No. 3-2-7	Supplying, installing, testing and commissioning split type variable speed inverter technology room Air conditioning unit 2 TR capacity having ISEER minimum 4.50 suitable to operate on 250V, 50 cycles, A.C. supply having 1 no. of air handling unit hi-wall/ floor mounting type complete with Refrigerants R410 A /R32 and copper condenser at position. specification no. APAC/ SAC	Nos.	2	62944	125888
1.4	Government of Maharashtra P.W.D(Electrical Wing) C.S.R 2018-19 . Item No. 3-2-9	Supplying, installing, testing and commissioning split type variable speed Inverter technology room Air conditioning unit 1.5 TR capacity having ISEER minimum 4.50 suitable to operate on250V, 50 cycles, A.C. supply having 1 no of air handling unit hiwall / floor mounting type complete with refrigerant R410 A/R32 and copper condensor at position. specification no.APAC/SAC	Nos.	1	51676	51676
1.5	Market Rate	Supply, installation, testing and commissioning of copper conductor 2C*1.0 sqmm Control cabling with PVC conduit from indoor to outdoor unit.	Rmt	40	312	12480
1.6	Market Rate	Refnets for VRV System (To be supplied by unit manufacturer) Vendor is expected to minimise no. of joints that is required for a complete installation.	Nos.	3	2550	7650

Sr. No.	Reference	Description of Items	Unit	Qty.	Supply and Installation	Supply and Installation Amount
					Rate	
1.7	Market Rate	Supply, installation, testing and commissioning of interconnecting Copper Refrigerant piping between indoor and outdoor unit of VRF system along with Insulation & all accessories like, T, Bend, Elbows. Piping shall be properly Clamped / Installed on Ceiling / Wall by providing GI angle, bracket, threaded support, nut, washer etc., complete piping shall be pressure tested. Insulation of Refrigerant Piping shall be with 19 mm thick nitrile rubber Thermal Insulation. All joints shall be sealed with good quality adhesive. All piping inside the room will be properly supported with hanger and all external pipe with proper supports and fittings				
		Final sizes ,of Copper Piping sizes shall be as per selected OEM's Requirement . HVAC Contractor shall prepare the shop drawing for				
		Cu Piping Scheme ,which would require final approval from Consultant / Architect ,prior to procurement & execution .				
		SUCTION LINE	Rmt	60	1202	72120
		LIQUID LINE	Rmt	60	847	50820
1.8	Market Rate	Supply, installation, testing and commissioning of drain piping using UPVC pipe SCH40 with UPVC fittings and insulated with 6mm thick nitrile rubber o class insulation finished with polished. The pipe goes below ground should be rapped with polythene sheet as follows:				
		40 mm Dia	Rmt	13	447.2	5634.72
		32 mm Dia	Rmt	22	343.2	7481.76
		25 mm	Rmt	21	215	4515
2		CABLE TRAY/ SUPPORTS/ ENCLOSURE / SLEEVES FOR / REFRIGERANT PIPING / CABLING				
2.1	D.S.R (E & M) 2018 (C.P.W.D)	Supplying and installing following size of perforated Hot Dipped Galvanised Iron cable tray (Galvanisation thickness not less than 50 microns) with perforation not more than 17.5%, in convenient sections, joined with connectors, suspended from the ceiling with G.I. suspenders including G.I. bolts & nuts, etc. as required.				
	Item No. 4.6.6	450 mm width X 50 mm depth X 2.0 mm thickness	Rmt	32	1213	38816
	Item No.4.6.4	300 mm width X 50 mm depth X 1.6 mm thickness	Rmt	8	875	7000
	Item No. 4.6.3	225 mm width X 50 mm depth X 1.6 mm thickness	Rmt	28	811	22708
		MS FRAME STRUCTURE				
2.2	Market Rate	Supply, fabrication and installation of MS base frame for outdoor units complete with 2 coat of epoxy painting, vibration isolation pads, supports, hangers, railing, brackets etc. For construction Construction as approved by Architect/ Consultant. Apply 2 coats of epoxy primer 2 coats of epoxy paint and finish painting as approved by Architect. Stand to be made as per site conditions.	Kg	8	265	2120
3		Ducting				
3.1	D.S.R (E & M) 2018 (C.P.W.D)	Supply, installation, balancing and commissioning of factory fabricated GSS sheet metal rectangular/round 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.				
	Item No. 16.12.1.1	Thickness 0.63 mm sheet (24 gauge)	Sqmtr.	50	983	49150
3.2	Market Rate	Supplying and erecting aluminium powder coated grill of suitable size for width length without collar dampers having matching colour with the existing false ceiling	Sqmtr.	2	1800	3600
3.3	Market Rate	Supply, installation, testing and commissioning of flexible duct 50 mm dia	Sqmtr.	8	884	7072

Sr. No.	Reference	Description of Items	Unit	Qty.	Supply and Installtion	Supply and Installtion Amount
					Rate	
3.4	Market Rate	Supply and Installation, testing, commissioing of Underdeck Insualtion with 25 mm thk Fire retardent Glass wool rigid boardcovered with R P tissue paper & 30 mm gauge perforated aluminium clading , density 80 kg/cu.m sheet all joints for fixing and GI screws	Sqmtr.	255	700	178500
4		VENTILATION SYSTEM FOR TOILET				
4.1	Market Rate	Supply and Installation, testing, commissioing of Propeller type wall mounted fan with louver, cowl and bird screen on outside.				
		50 cfm	Nos.	6	1950	11700
4.2	Market Rate	Supply and Installation, testing, commissioing of axial type cabinet fresh air fan with cowl and bird screen on outside				
		300 cfm	Nos.	1	4200	4200
		Total Cost of HVAC Services (Rs)				9,53,093

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MANGALURU SMART CITY LTD
Rate Analysis-Laterite Cladding

Descriptions	Unit	Quantity	Rate	Amount
Providing and Fixing Laterite Stone Cladding 25mm thk (polished) with an adhesive over existing cement palster surface with two coat of polish,including all lead and lifts,scaffoldingetc. and complete.				
Details of cost for 1 sqm.				
MATERIAL				
25 mm thick Laterite tiles. Qty. = 1.00 Sqm +Add wastage @ 2.5% = 0.025 Sqm, Total = 1.025 sqm.	Sqm	1.025	1304	1336.6
25 mm thick laterite tiles				
Carriage of tiles	L.S	1.025	2	2.05
Adhesive	Kg	13.4375	18.5000	248.59
Polish-First Coat (Rs.600/Lit), 1lit covered 7.36 Sq m	Lit	1	81.52	81.52
Polish-Second Coat (Rs.600/Lit), 1lit covered 9.29 Sq m	Lit	1	64.59	64.59
LABOUR	Sqm	1	483.75	483.75
Sundries	L.S	16.9	2	33.8
TOTAL				2250.9
Add 1 % Water charges on "W"				22.51
TOTAL				2273.41
Add 10% CPOH on "Y"				227.34
TOTAL				2500.75
Cost for 1 sqm.				2500.75
Say				2500.75

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Rate Analysis- Eco Loc Permeable Paver Block

Sr.No.	Description	Unit	Qty.	Rate	Amount	References
1	Providing and laying eco-loc permeable pavers,80mm or equivalent block making machine with strong vibratory compaction, of approved size, design & shape, laid in required colour and pattern over and including 50mm thick compacted bed of coarse sand, filling the joints with line sand etc. all complete as per the direction of Engineer-in-charge.					
	Details of cost for 10.00 sqm					
A	MATERIAL					
i	Interlocking C.C. paver block	Sqm	10	1554.63	15546.25	Basant Betons,Quotation
ii	Bedding layer - 50mm thick Coarse sand or crushed sand =10x0.050=0.50 cum	Cum	0.5	1700	850	KPWD III, Code No. 0731, Material rate-51
iii	Carriage of Coarse sand-25Km	Cum	0.5	80	40	
iv	Natural Sand (5.6 to 75 Micron)	Cum	0.15	1700	255	KPWD III, Code No. 0772, Material rate-54
v	Carriage of Coarse sand-25Km	Cum	0.15	80	12	
vi	Laying charges (Bassed on actual observation)					
B	LABOUR					
i	Mason (brick layer) 1st class	Day	0.5	466.2	233.1	KPWD ,Labour rate-89 Zone I
ii	Mason (brick layer) 2nd class	Day	0.5	456.2	228.1	KPWD ,Labour rate-90 Zone I
iii	Beldar (Mason Class - 1)	Day	1	456.2	456.2	KPWD ,Labour rate-13 Zone I
iv	Heavy Duty Mazdoor	Day	0.5	446.2	223.1	KPWD ,Labour rate-5 Zone I
	Total				17843.75	
	Add 1 % Water charges				178.4375	
	Total				18022.19	
	Add 15 % Contractor's profit and overheads				2703.33	
	Cost for 10.00 sqm				20725.52	
	Cost for 1.00 sqm.				2072.552	
	Say				2073	

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Rate Analysis-Taking out paver block

Sr.No.	Description	Unit	Quantity	Rate	Amount	Reference
1	Taking out existing CC interlocking paver blocks from footpath/ central verge, including removal of rubbish etc., disposal of unserviceable material to the dumping ground, for which payment shall be made separately and stacking of serviceable material within 50 metre lead as per direction of Engineer-in-Charge.					
	Details of cost for 10 sqm.					
a	Labour					
b	Beldar	Day	0.25	446.2	111.55	KPWD 18-19 SOR, Pg No.LVI SI No.5
c	Collie	Day	1	446.2	446.2	KPWD18-19 SOR, Pg No.LVI,SI No.6
d	Sundries	LS	2.7	1.73	4.67	CPWD Pg No 29,
	Total				562.42	
e	Add 1% Water Charges				5.62	
	Total				568.04	
f	Add 10 % Contractor's profit				56.8	
g	Add 10 % Contractor's overheads				56.804	
	Cost of 10 sqm				681.644	
	Cost of 1 sqm				68.16	

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Rate Analysis - Granular Sub Base under Paver Block

Sr No	Ref. to MoRTH Spec.	Description	Unit	Quantity	Rate Rs	Cost Rs	Remarks/ Input ref.
4.1	401	Granular Sub-Base with Close Graded Material (Table:- 400-1)					
	A	Plant Mix Method					
		Construction of granular sub-base by providing close graded Material, mixing in a mechanical mix plant at OMC, carriage of mixed Material to work site, spreading in uniform layers with motor grader on prepared surface and compacting with vibratory power roller to achieve the desired density, complete as per clause 401					
		Unit = cum					
		Taking output = 225 cum (450 tonne)					
		a) Labour					
		Mate	day	0.4	395	158	Sl.No.12,Page No.LIV,
		Mazdoor skilled	day	2	446.2	892.4	Sl.No.6,Page No.LIV,
		Mazdoor	day	8	446.2	3569.6	Sl.No.6,Page No.LIV,
		b) Machinery					
		Wet mix plant @ 60 tonne capacity per hour	hour	3	960	2880	1028
		Electric generator 100KVA	hour	6	534	3204	1321
		Water tanker 6 KL capacity 5 km lead with one trip per hour	hour	4.5	51.5	231.75	1032
		Front end loader 1 cum bucket capacity	hour	6	593	3558	1012
		Tipper 10 tonne	tonne.k m	450 x L	4	28800	
		Add 10 per cent of cost of carriage to cover loading and unloading				2880	
		Motor Grader 110 HP	hour	6	2125	12750	
		Plate Compactor	Day	1	254	254	Sl.No.65,Page No.XXXV VIII
		c) Material					
		Close graded Granular sub-base Material as per table 400-1					
		For Grading-II Material					
		53 mm to 9.5 mm @ 50 per cent	cum	144	1460	210240	M-013
		9.5 mm to 2.36 mm @ 20 per cent	cum	57	1340	76380	M-017
		2.36 mm below @ 30 per cent	cum	86.4	1150	99360	M-020
		Cost of water	KL	27	40	1080	Page No.V,Sl.No.758
4.1A	(i)	Rate per cum for grading-II Material					
		d) Overhead charges @ 10% on (a+b+c)				44623.78	
		e) Contractor's profit @ 10% on (a+b+c+d)				49086.15	
		Cost for 225 cum = a+b+c+d+e				539947.7	
		Rate per cum = (a+b+c+d+e)/225				2399.767	
					say	2400	

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MSCL Mangaluru**

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MSCL Mangaluru**

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MSCL Mangaluru**

**General Manager Technical
MSCL Mangaluru**

RATE ANALYSIS OF REFIXING THE EXISTING STRUCTURAL STEEL (ROOF TRUSS)

Sr.No.	Description	Unit	Quantity	Rate	Amount
1	Refixing the existing Structural steel (Roof Truss) work riveted, bolted or welded in built up sections, trusses and framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer all complete				
	20 mm dia holding down bolts	Quintile	0.0529	5500	290.95
	Carriage of Steel tonne 0.415 92.24 38.28 (0.160+0.053+0.091+0.099+0.007+0.005)=0.415 tonne	Tonne	0.415	92.24	38.28
	LABOUR				
	Fitter (grade 1)	Day	2.7	487	1314.90
	Blacksmith 2nd class	Day	3.6	448	1612.80
	Skilled Beldar (for floor rubbing etc.)	Day	5.4	407	2197.80
	Beldar	Day	3.6	368	1324.80
	Bandhani	Day	0.44	407	179.08
	Applying priming coat-T.Iron 9.5x0.4 = 3.80sqm.+ Struts 2.70x0.16 = 0.43sqm.+ Ties 5.4x0.124 = 0.67sqm.+ Braces 2x1.84x0.12 = 0.44 sqm.+ Ties 2.8x0.12 = 0.34 sqm Total = 5.68 sqm.				
	Rate as per item no 13.50.3 of SH : Finishing	Sqm	5.68	29.1	165.29
	Sundries L.S. 80.73 1.73 139.66	LS	80.73	1.73	139.66
	TOTAL				7263.56
	Add 1 % Water charges				71.24
	TOTAL				7334.80
	Add 10 % Contractor's profit and overheads				719.51
	Quantity of net steel (151.95+50.65+180.95+6.5+5.04) = 395.09 kg= 3.95 quintal				
	Cost for 3.95 quintal				8054.31
	Cost of per kg.				20.39
	Say				20.4

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Rate Analysis -Fixing G S Sheet

Sr.No.	Description	Unit	Quantity	Rate	Amount
1	Fixing corrugated G.S. sheet roofing including vertical / curved surface fixed with polymer coated J or L hooks, bolts and nuts 8 mm diameter with bitumen and G.I. limpet washers or with G.I. limpet washers filled with white lead, including a coat of approved steel primer and two coats of approved paint on overlapping of sheets complete (up to any pitch in horizontal/ vertical or curved surfaces), excluding the cost of purlins, rafters and trusses and including cutting to size and shape wherever required.				
	Carriage of G.I. Sheet and accessories G.I. Seam bolts and nuts 60cm centre to centre zig-zag i.e 30cm centre to centre straight. Breadth is 5.1metre . No. Of bolts in one lap $5.1/0.3=17$ Nos. $2 \times 26(\text{laps}) \times 17 \text{nos} = 884$ nos	tonne	2.326	92.24	214.55
	Galvanised steel bolts & nuts 6mm dia and 25mm long round head with slots G.I., J or L hooks 8mm dia. (No. Of purlins to be used 5 on either side) $2 \times 5 \times 27$	10 nos.	88.4	38	3359.20
	Galvanised steel J or L hooks 8mm dia	10 nos.	81	115	9315.00
	G.I. Limpset washer (total of seam and J bolts) $884+810=1694$	100 nos.	16.94	35	592.90
	Bitumen washer	100 nos.	16.94	30	508.20
	Carriage of bolts and washers	LS	26.91	1.73	46.55
	Sundries	LS	53.82	1.73	93.11
	Labour				
	Mistry	Day	1.3	487	633.10
	Carpenter 2nd class	Day	15.5	448	6944.00
	Beldar	Day	15.5	368	5704.00
	Red oxide Zinc chromite primer	Liters	2.53	65	164.45
	Carriage of material	LS	0.52	1.73	0.90
	Painter	Day	1.13	448	506.24
	Coolie	Day	1.13	368	415.84
	Brushes, sand papers i/c sundries	LS	50.57	1.73	87.49
	Roofing paint for iron sheets in red colour	Liters	3.73	120	447.60
	Carriage of paint	LS	6.76	1.73	11.69
	Painter	Day	2.53	448	1133.44
	Coolie	Day	2.53	368	931.04
	Brushes and sandpapers	LS	31.98	1.73	55.33
	Sundries	LS	38.09	1.73	65.90
				Total	31230.52
	Add 1% Water Charges				312.31
				Total	31542.83
	Add Contractor Profit @10%				3154.28
	Cost of 184.518 Sqm			Total	34697.11
	Cost of 1 Sqm.				188.04
	Say				188.00

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Rate Analysis for Jacketing of Column

Sr.No.	Description	Cum	No.	L	B	D	Qty.	Rate	Amount
1	KSRRB M200-12.1. Dismantling of existing structures like culverts, bridges, retaining walls and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts complete as per specifications. KSRRB M200-13.1. do- II. By Mechanical Means. A. Cement Concrete Grade M-15 & M-25.	Cum	1	1.83	0.04	3.6	0.26	390	101
2	KSRB 4.2.1 Providing and laying in position reinforced cement concrete of Design Mix M25 with OPC @ 340kgs, with 20mm and down size graded granite metal coarse aggregates @0.70 cum and fine aggregates @ 0.47cum, with super plasticisers @ 3 liters conforming to IS 9103-1999 reaffirmed-2008 at machine mixed, concrete laid in layers not exceeding 15 cms thick, vibrated for all works in foundation for footings , pedestals, retaining walls, return walls, walls (any thickness) including attached pilasters, columns pillars, posts, struts, buttresses, bed blocks, anchor blocks & plinths etc., including cost of all materials, labour, HOM curing, complete but excluding cost of reinforcement as per specifications. Specification No. KBS 4.1, 4.6 (KPWD 18-19,SI No.4.10,Pg.No.14)								
	New Column Concrete	Cum	1	0.43	0.58	3.6	0.89784		
	Existing Column Concrete Size after Chipping of Concrete Cover of 40mm,0.15x0.3m	Cum	-1	0.15	0.3	3.6	-0.162		
							0.74	6431	4759
4	KSRB 4-6.5 : Providing and removing centering, shuttering, strutting, propping etc., and removal of form work for columns , pillars, post and struts, square I rectangular/ polygon in plan including cost of all materials, labour complete as per specifications. Specification No. KBS 4.6.2 (KPWD 18-19,SI.No.4.32,Pg.No.16)	Sqm	1	2.02		3.6	7.27	456	3315
5	KSRRBM 2800-11. Epoxy bonding of new concrete to old concrete including cost of materials, labour, HOM complete as per specifications. MORTH Specification No. 2805	Sqm	1	0.9		3.6	3.24	573	1857
								Total	10032
	Sundries @ 5% of total Cost								501.6
	Cost for 0.74 Cum								10533.6
	Cost for 1 Cum of Concrete								14234.59

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Name of the Work :- Mangalore Smart City

1.0 BOQ of UPOR UGT-Civil Work

Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks
1.00	Earth work excavation for foundation of structures upto 3 mtrs. by mechanical means as per drawing and technical specification, including setting out, providing shoring, strutting and bracing, removal of stumps and other deleterious matter, dressing of sides and bottom, filling back the excavated earth to the extent required and utilising I transporting the remaining earth upto 1.00km lead. including cost of labour, materials and HOM etc., complete. do-In all types of soils (KPWD 18-19,SI No.2.23.1,Pg.No.8)	Cum	28.25	57.20	1,616	
2.00	Earth work excavation for foundation of structures upto 3 mtrs. by mechanical means as per drawing and technical specification, including setting out, providing shoring, strutting and bracing, removal of stumps and other deleterious matter, dressing of sides and bottom, filling back the excavated earth to the extent required and utilising I transporting the remaining earth upto 1.00km lead. including cost of labour, materials and HOM etc., complete. do- Soft rock/ordinary rock (without blasting) (KPWD 18-19,SI No.2.23.2,Pg.No.8)	Cum	9.42	73.70	694	
3.00	Earthwork in excavation for foundation of structures by Mechanical means as per drawing and technical specification including setting out construction of shoring, strutting, barricading, danger light, bracing, removal of slumps and other deleterious matter, dressing of sides and levelling the bottom of trench to the extent required, utilising the available excavated earth locally for the work etc. complete. (Depth upto 3m). Hard Rock -Any rock Excavation by using mechanical plants/machinery (KUWSDB 2019)	Cum	9.42	744.70	7013	
4.00	KSRB 2.3 : Filling available excavated earth (excluding rock) in sides of foundations upto plinth in layers not exceeding 20 cms. in depth, compacting each deposited layer by ramming after watering with lead upto 50 m. and lift upto 1.5 m. including cost of all labour complete as per specifications. specification. No. KBS 2.9 (KPWD 18-19,SI.No.2.10,Pg No.7)	Cum	9.54	221.10	2,110	
5.00	KSRB 2.8 : Providing and Filling in foundation with granite / trap broken metal 100mm. and down size, with approved sand including hand packing, ramming, watering, including cost of all materials and labour with all lead and lift. complete as per specifications. specification. No. KBS (KPWD 18-19,SI.No.2.15,Pg.No.7)	Cum	3.83	2795.10	10,697	
6.00	KSRB 4-1.6 ; Providing and laying in position plain cement concrete of Mix 1:2:4 with OPC @ 240kgs, with 20mm and down size graded granite metal coarse aggregates @ 0.878 cum and fine aggregates @ 0.53cum, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation, plinth and cills, including cost of all materials, labour, HOM curing complete as per specifications. Specification No. KBS 4.1, 4.2 (KPWD 18-19,SI No.4.6,Pg.No.13)	Cum	2.21	6490.00	14,320	
7.00	KSRB 4.2.1 Providing and laying in position reinforced cement concrete of Design Mix M25 with OPC@ 340kgs, with 20mm and down size graded granite metal coarse aggregates @0.70 cum and fine aggregates @ 0.47cum, with super plasticisers@ 3 liters confirming to IS 9103-1999 reaffirmed-2008 at machine mixed, concrete laid in layers not exceeding 15 cms thick, vibrated for all works in foundation for footings , pedestals, retaining walls, return walls, walls (any thickness) including attached pilasters, columns pillars, posts, struts, buttresses, bed blocks, anchor blocks & plinths etc., including cost of all materials, labour, HOM curing, complete but excluding cost of reinforcement as per specifications. Specification No. KBS 4.1, 4.6 (KPWD 18-19,SI No.4.10,Pg.No.14)	Cum	5.39	6817.80	36,772	
8.00	KSRB 4.2.7 Providing and laying in position reinforced cement concrete of design Mix M25 with OPC @ 340kgs, with 20mm and down size graded granite metal coarse aggregates @0.70cum and fine aggregates @ 0.47cum, with super plasticisers @31ts confirming to IS9103-1999 Reaffirmed-2008, machine mixed, concrete laid in layers not exceeding 15 cms thick, vibrated for all works in ground floor level for roof slabs , staircase, lintels and beams retaining walls, return walls, walls (any thickness) including attached pilasters, columns , lintles, pillars, posts, struts, buttresses, string or lacing courses, parapets, coping, bed blocks, anchor blocks, plain window cills, fillets etc., including cost of all materials, labour, HOM curing, complete but excluding cost of reinforcement as per specifications. Specification No. KBS 4.1, 4.6 (KPWD 18-19,SI.No.4.12,Pg No.14)	Cum	9.32	7074.10	65,906	

Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks
9.00	KSRB 4-6.1 : Providing and removing centering, shuttering, strutting, propping etc., and removal of form work for foundations , footings, bases of columns for mass concrete including cost of all materials, labour complete as per specifications. Specification No. KBS 4.6.2 (KPWD 18-19,Sl.No.4.28,Pg No.16)	Sqm	5.88	289.30	1,701	
10.00	KSRB 4-6.4 : Providing and removing centering, shuttering, strutting, propping etc., and removal of form work for vertical surface such as walls at any thickness, including attached pilasters, buttresses, plinth cills and string courses cost of all materials, labour complete as per specifications. Specification No. KBS 4.6.2	Sqm	54.00	397.10	21,443	
11.00	KSRB 4-6.2 : Providing and removing centering, shuttering, strutting, propping etc., and removal of formwork for suspended floors, landings, balconies and likes, thickness upto 200 mm including cost of all materials, labour complete as per specifications. Specifications No. KBS 4.6.2	Sqm	11.20	448.80	5,027	
12.00	KSRB 4.9.2 : Providing T.M.T steel reinforcement for R.C.C work including straightening, cutting, bending, hooking, placing in position, lapping and l or welding wherever required, tying with binding wire and anchoring to the adjoining members wherever necessary complete as per design (laps, hooks and wastage shall not be measured and paid) cost of materials, labour, HOM complete as per specifications. Specification No. KBS 4.6.3 TMT bars Fe 500 (KPWD 18-19,Sl.No.4.46.2,Pg No.18)	MT	1.77	77860.20	1,37,439	
13.00	Providing fusion bonded epoxy coating not less than 175 microns thickness and upto 300 microns to reinforcement of all diameters as per IS: 13620-1993 including testing of coating at plant The rate is inclusive of cost on account of careful handling, PVC coated binding wire instead of GI Binding wire, touch up material supplied by coating agency, repair work, loading, unloading and straightening of bent rods etc., complete as per specification and as directed by the Engineer in charge. do For 10mm to 16mm dia bars	MT	1.77	11588.50	20,456	
14.00	Providing external walls with texture finish using approved brand paint, applied uniformly in three coats over one coat of primer including cost of all materials, machineries, labour, transportation, loading and unloading, all lead and lift and all other incidental charges including scaffolding and removing stains, complete as per specifications. (KPWD 18-19,Sl.No 15.103.Pg No.127)	Sqm	18.25	374.00	6,826	
15.00	KSRB15-3 : Providing 15mm thick cement plaster in single coat with cement mortar to brick masonry including rounding off corners wherever required smooth rendering. Providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications. KSRB15-3.5 : -do - cement mortar 1:4	Sqm	39.86	244.20	9,733	
16.00	Providing and fixing food grade epoxy painting to over head tank, under ground tank and sump tank after cleaning and drying including pumping and bailing out of water, including cost of all materials labour lead and lifts etc., complete (KPWD 18-19,Sl.No.10.6,Pg.No.69)	Sqm	48.66	96.80	4,710	
17.00	Waterproofing of RCC Terrace I podium slab I toilet I utilities I water retaining structure by preparing the surface by chipping and cleaning and Grouting of Honey comb, voids, cracks I construction joints with cement slurry (1kg cement added in 10 ltr of water) added with 100gm of inorganic accelerator, followed by spraying of liquid biological modified alkaline earth silicates@ 040 ltr per sqm on whole surface to reduce the micro porosity and allowing it to dry, curing the surface for the silicates to penetrate deeper into the concrete and spraying waterproofing impregnate liquid containing silane and silanollinear copolymer@ 0.50 ltr per sqm and finally applying polymer slurry made out of cross linked acrylic I styrene I butadiene & cement in the ratio of 1:0.1, @ 0.50kgsqm on the whole surface, including all labour charges tools and equipments, all complete as per the specification (KPWD 18-19,Sl.No.10.5.1,Pg.No.69)	Sqm	11.25	578.60	6,509	

Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks
18.00	Providing and laying integral cement based treatment for water proofing on the vertical surface by fixing specified stone slab 22 mm to 25 mm thick with cement slurry mixed with water proofing compound conforming to IS:2645 in recommended proportions with a gap of 20 mm (minimum) between stone slabs and the receiving surfaces and filling the gaps with neat cement slurry mixed with water proofing compound and finishing the exterior of stone slab with cement mortar 1:3 (1 cement : 3 coarse sand) 20 mm thick with neat cement punning mixed with water proofing compound in recommended proportion complete at all levels and as directed by Engineer-in-charge. Using rough Kota stone (CPWD 2019,22.2)	Sqm	43.07	1738.00	,74,856	
19.00	Providing and fixing in position pre-cast R.C.C. manhole cover and frame of required shape and approved quality.HD-20 Circular shape 600 mm internal dia. (CPWD 19,19.19.4.1)	Nos.	1.00	1,471.50	1,472	
20.00	Providing M.S. foot rests including fixing in RCC tank with 20x20x10 cm cement concrete blocks 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) as per standard design : With 20 mm diameter round bar (CPWD 19.15.2)	Nos.	9.00	383.70	3,453	
21.00	Extra Lead for Disposing off unserviceable materials upto 10 Km beyond initial Lead of 5 km Item No 17.4 KSRRB M100-4.1- Earth	Cun	37.54	90.86	3,411	
		Total			4,36,164	

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MSCL Mangaluru**

**General Manager Technical
MSCL Mangaluru**

Name of the Work :- Mangalore Smart City
1.1 Measurement Sheet of UPOR-UGT Civil Work

Sr. No.	Description	Unit	No's	L	B	H	Qty.
	Earth work excavation for foundation of structures upto 3 mtrs. by mechanical means as per drawing and technical specification, including setting out, providing shoring, strutting and bracing, removal of stumps and other deleterious matter, dressing of sides and bottom, filling back the excavated earth to the extent required and utilising 1 transporting the remaining earth upto 1.00km lead. including cost of labour, materials and HOM etc., complete. do-In all types of soils (KPWD 18-19,SI No.2.23.1,Pg.No.8)						
	UG tank						
	Foundation	Cum	1	5.5	3.5	2.18	41.97
	Sump	Cum	1	2.5	1.6	1.28	5.12
		Cum				Total	47.09
1	Consider 60% Qty in Soil	Cum					28.25
2	Consider 20% Qty in Soft Rock	Cum					9.42
3	Consider 20% Qty in Hard Rock	Cum					9.42
4	KSRB 2.3 : Filling available excavated earth (excluding rock) in sides of foundations upto plinth in layers not exceeding 20 cms. in depth, compacting each deposited layer by ramming after watering with lead upto 50 m. and lift upto 1.5 m. including cost of all labour complete as per specifications. specification. No. KBS 2.9 (KPWD 18-19,SI.No.2.10,Pg No.7)						
	Total Excvation	Cum	1	47.09			47.09
	Foundation & Sump Drop wall Vol	Cum	-1	5.39			-5.39
	Vol of Tank	Cum	-1	4.0	2.0	1.8	-14.40
	Sump Vol	Cum	-1	2.0	1.0	0.6	-1.20
	Concrete Vol-Wall and Slab	Cum	-1	9.32			-9.32
	Soling Vol	Cum	-1	3.83			-3.83
	PCC	Cum	-1	2.21			-2.21
	Tank Sump vol	Cum	-1	2.0	1.0	0.6	-1.20
		Cum				Total	9.54
5	KSRB 2.8 : Providing and Filling in foundation with granite / trap broken metal 100mm. and down size, with approved sand including hand packing, ramming, watering, including cost of all materials and labour with all lead and lift. complete as per specifications. specification. No. KBS (KPWD 18-19,SI.No.2.15,Pg.No.7)						
	Soling	Cum	1	5.2	3.2	0.23	3.83
		Cum				Total	3.83
6	KSRB 4-1.6 ; Providing and laying in position plain cement concrete of Mix 1:2:4 with OPC @ 240kgs, with 20mm and down size graded granite metal coarse aggregates @ 0.878 cum and fine aggretes @ 0.53cum, machine mixed, concrete laid in layers not exceeding 15 ems. thick, well compacted, in foundation, plinth and cills, including cost of all materials, labour, HOM curing complete as per specifications. Specification No. KBS 4.1, 4.2 (KPWD 18-19,SI No.4.6,Pg.No.13)						
	UG tank						
	Foundation	Cum	1	5.2	3.2	0.1	1.66
	Drop portion	Cum	1	2	0.6	0.1	0.12
	Triangular Portion	Cum	1	2		0.21125	0.42
		Cum				Total	2.21
7	KSRB 4.2.1 Providing and laying in position reinforced cement concrete of Design Mix M25 with OPC@ 340kgs, with 20mm and down size graded granite metal coarse aggregates @0.70 cum and fine aggretes @ 0.47cum, with super plasticisers@ 3 liters confirming to IS 9103-1999 reaffirmed-2008 at machine mixed, concrete laid in layers not exceeding 15 ems thick, vibrated for all works in foundation for footings, pedestals, retaining walls, return walls, walls (any thickness) including attached pilasters, columns pillars, posts, struts, buttresses, bed blocks, anchor blocks & plinths etc., including cost of all materials, labour, HOM curing, complete but excluding cost of reinforcement as per specifications. Specification No. KBS 4.1, 4.6 (KPWD 18-19,SI No.4.10,Pg.No.14)						

Sr. No.	Description	Unit	No's	L	B	H	Qty.
	UG tank						
	Foundation	Cum	1	4.9	2.9	0.35	4.97
	Sump Drop wall portion	Cum	1	2.0	0.35	0.6	0.42
		Cum				Total	5.39
8	KSRB 4.2.7 Providing and laying in position reinforced cement concrete of design Mix M25 with OPC @ 340kgs, with 20mm and down size graded granite metal coarse aggregates @0.70cum and fine aggregates @ 0.47cum, with super plasticisers @31ts confirming to IS9103-1999 Reaffirmed-2008, machine mixed, concrete laid in layers not exceeding 15 cms thick, vibrated for all works in ground floor level for roof slabs, staircase, lintels and beams retaining walls, return walls, walls (any thickness) including attached pilasters, columns, lintels, pillars, posts, struts, buttresses, string or lacing courses, parapets, coping, bed blocks, anchor blocks, plain window cills, fillets etc., including cost of all materials, labour, HOM curing, complete but excluding cost of reinforcement as per specifications. Specification No. KBS 4.1, 4.6 (KPWD 18-19,SI.No.4.12,Pg No.14)						
	Longwall	Cum	2	4.5	0.25	1.8	4.05
	Shortwall	Cum	2	2.0	0.25	1.8	1.80
	Sump Shortwall	Cum	2	1.0	0.25	0.6	0.30
	Sump Longwall	Cum	1	2.0	0.25	0.6	0.30
	Haunches-Horizontal Longwall	Cum	2	4.5	0.15	0.15	0.20
	Haunches-Horizontal Shortwall	Cum	2	2.0	0.15	0.15	0.09
	Haunches-Vertical	Cum	4	1.8	0.15	0.15	0.16
	Sump Horizontal Haunches Longwall	Cum	2	2.0	0.15	0.15	0.09
	Sump Horizontal Haunches Shortwall	Cum	2	1.0	0.15	0.15	0.05
	Sump Vertical Haunches	Cum	2	0.6	0.15	0.15	0.03
	Top slab	Cum	1	4.5	2.50	0.2	2.25
		Cum				Total	9.32
9	KSRB 4-6.1 : Providing and removing centering, shuttering, strutting, propping etc., and removal of form work for foundations, footings, bases of columns for mass concrete including cost of all materials, labour complete as per specifications. Specification No. KBS 4.6.2 (KPWD 18-19,SI.No.4.28,Pg No.16)						
	UG tank						
	Foundation-Long Side	Sqm	2	4.9		0.35	3.43
	Foundation-Short Side	Sqm	2	2.9		0.35	2.03
	Drop Portion	Sqm	2	0.6		0.35	0.42
		Sqm				Total	5.88
10	KSRB 4-6.4 : Providing and removing centering, shuttering, strutting, propping etc., and removal of form work for vertical surface such as walls at any thickness, including attached pilasters, buttresses, plinth cills and string courses cost of all materials, labour complete as per specifications. Specification No. KBS 4.6.2						
	Longwall	Sqm	4	4.5		1.8	32.40
	Shortwall	Sqm	4	2.0		1.8	14.40
	Sump Longwall-Outer Side	Sqm	2	2.0		0.6	2.40
	Sump Shortwall-Outer Side	Sqm	2	1.0		0.6	1.20
	Sump Longwall-Inner Side	Sqm	2	2.0		0.6	2.40
	Sump Shortwall-Inner Side	Sqm	2	1.0		0.6	1.20
						Total	54.00
11	KSRB 4-6.2 : Providing and removing centering, shuttering, strutting, propping etc., and removal of formwork for suspended floors, landings, balconies and likes, thickness upto 200 mm including cost of all materials, labour complete as per specifications. Specifications No. KBS 4.6.2						
	Top Slab	Sqm	1	4.0	2.00		8.00
	Sides	Sqm	4	4.0	0.20		3.20
						Total	11.20
12	KSRB 4.9.2 : Providing T.M.T steel reinforcement for R.C.C work including strai						
			Concret e in Cum	Kg/Cum	Kg		MT
	Foundation		5.39	120	647.22		0.65
	Wall and Slab		9.32	120	1118		1.12
			14.71	0.00		Total	1.77

Sr. No.	Description	Unit	No's	L	B	H	Qty.
13	Providing fusion bonded epoxy coating not less than 175 microns thickness and upto 300 microns to reinforcement of all diameters as per IS: 13620-1993 including testing of coating at plant The rate is inclusive of cost on account of careful handling, PVC coated binding wire instead of GI Binding wire, touch up material supplied by coating agency, repair work, loading, unloading and straightening of bent rods etc., complete as per specification and as directed by the Engineer in charge. do For 10mm to 16mm dia bars	MT	1.77				1.77
14	Providing external walls with texture finish using approved brand paint, applied uniformly in three coats over one coat of primer including cost of all materials, machineries, labour, transportation, loading and unloading, all lead and lift and all other incidental charges including scaffolding and removing stains, complete as per specifications. (KPWD 18-19,SI.No 15.103.Pg No.127)						
	Tank Wall Above GL Longwall	Sqm	2	4.5		0.5	4.50
	Tank Wall Above GL Shortwall	Sqm	2	2.5		0.5	2.50
	Tank Top Slab	Sqm	1	4.5		2.5	11.25
		Sqm				Total	18.25
15	KSRB15-3 : Providing 15mm thick cement plaster in single coat with cement mortar to brick masonry including rounding off corners wherever required smooth rendering, Providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications. KSRB15-3.5 : -do - cement mortar 1:4						
	Top	Sqm	1	4.5	2.50		11.25
	LongWall	Sqm	2	4.0	1.80		14.40
	ShortWall	Sqm	2	2.0	1.80		7.20
	Sump Long-sidewall	Sqm	2	1.0	0.60		1.20
	Sump Short-sidewall	Sqm	2	2.0	0.60		2.40
	Add 10% Extra						3.41
						Total	39.86
16	Providing and fixing food grade epoxy painting to over head tank, under ground tank and sump tank after cleaning and drying including pumping and bailing out of water, including cost of all materials labour lead and lifts etc., complete (KPWD 18-19,SI.No.10.6,Pg.No.69)						
	UG Tank						
	Bottom	Sqm	1	4.0	2.00		8.00
	Top	Sqm	1	4.5	2.50		11.25
	LongWall	Sqm	2	4.0	1.80		14.40
	ShortWall	Sqm	2	2.0	1.80		7.20
	Sump sidewall	Sqm	2	1.0	0.60		1.20
	Sump sidewall	Sqm	2	2.0	0.60		2.40
	Add 10% Extra						4.21
		Sqm				Total	48.66
17	Waterproofing of RCC Terrace I podium slab I toilet I utilities I water retaining structure by preparing the surface by chipping and cleaning and Grouting of Honey comb, voids, cracks I construction joints with cement slurry (1kg cement added in 10 ltr of water) added with 100gm of inorganic accelerator, followed by spraying of liquid biological modified alkaline earth silicates@ 040 ltr per sqm on whole surface to reduce the micro porosity and allowing it to dry, curing the surface for the silicates to penetrate deeper into the concrete and spraying waterproofing impregnate liquid containing silane and silanollinear copolymer@ 0.50 ltr per sqm and finally applying polymer slurry made out of cross linked acrylic I styrene I butadiene & cement in the ratio of 1:0.1, @ 0.50kgsqm on the whole surface, including all labour charges tools and equipments, all complete as per the specification (KPWD 18-19,SI.No.10.5.1,Pg.No.69)						
	UG tank top Slab	Sqm	1	4.5	2.5		11.25
		Sqm				Total	11.25

Sr. No.	Description	Unit	No's	L	B	H	Qty.
18	Providing and laying integral cement based treatment for water proofing on the vertical surface by fixing specified stone slab 22 mm to 25 mm thick with cement slurry mixed with water proofing compound conforming to IS:2645 in recommended proportions with a gap of 20 mm (minimum) between stone slabs and the receiving surfaces and filling the gaps with neat cement slurry mixed with water proofing compound and finishing the exterior of stone slab with cement mortar 1:3 (1 cement : 3 coarse sand) 20 mm thick with neat cement punning mixed with water proofing compound in recommended proportion complete at all levels and as directed by Engineer-in-charge. Using rough Kota stone (CPWD 2019,22.2)						
	Raft Base	Sqm	1	4.9	2.9		14.21
	Raft Side	Sqm	2	4.9	0.35		3.43
	Raft Side	Sqm	2	2.9	0.35		2.03
	LongWall	Sqm	2	4.9	1.5		14.70
	ShortWall	Sqm	2	2.9	1.5		8.70
						Total	43.07
19.00	Providing and fixing in position pre-cast R.C.C. manhole cover and frame of required shape and approved quality.HD-20 Circular shape 600 mm internal dia. (CPWD 19,19.19.4.1)						
	tank top Cover	Nos.	1				1.00
		Nos.				Total	1.00
20.00	Providing M.S. foot rests including fixing in RCC tank with 20x20x10 cm cement concrete blocks 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) as per standard design : With 20 mm diameter round bar (CPWD 19.15.2)						
	Tank Depth	Rm	1	1.8			1.80
	Foot Rest @200mm distance	Nos.	9				9.00
21.00	Extra Lead for Disposing off unserviceable materials upto 10 Km beyond initial Lead of 5 km Item No 17.4 KSRRB M100-4.1-Earth						
	Total Excavation	Cum	1	47.09			47.09
	Refilling Qty.	Cum	-1	9.54			-9.54
		Cum			Disposal Qty.		37.54

Assistant Engineer
MSCL Mangaluru

Assistant Executive Engineer
MSCL Mangaluru

Executive Engineer
MSCL Mangaluru

General Manager Technical
MSCL Mangaluru

1.2 Rate Analysis for UPOR UGT,OHT and ETP

1	Earth work excavation for foundation of structures upto 3 mtrs. by mechanical means as per drawing and technical specification, including setting out, providing shoring, strutting and bracing, removal of stumps and other deleterious matter, dressing of sides and bottom, filling back the excavated earth to the extent required and utilising I transporting the remaining earth upto 1.00km lead. including cost of labour, materials and HOM etc., complete. do-In all types of soils (KPWD 18-19,SI No.2.23.1,Pg.No.8)			
	Basic rate		52	
	Add 10% For area weightage (Mangalore City)		5.2	
		Rate	57.20	Cum

2	Earth work excavation for foundation of structures upto 3 mtrs. by mechanical means as per drawing and technical specification, including setting out, providing shoring, strutting and bracing, removal of stumps and other deleterious matter, dressing of sides and bottom, filling back the excavated earth to the extent required and utilising I transporting the remaining earth upto 1.00km lead. including cost of labour, materials and HOM etc., complete.do- Soft rock/ordinary rock (without blasting) (KPWD 18-19,SI No.2.23.2,Pg.No.8)			
	Basic rate		67	
	Add 10% For area weightage (Mangalore City)		6.7	
		Rate	73.70	Cum

3	Earthwork in excavation for foundation of structures by Mechanical means as per drawing and technical specification including setting out construction of shoring, strutting, barricading, danger light, bracing, removal of slumps and other deteriorous matter, dressing of sides and levelling the bottom of trench to the extent required, utilising the available excavated earth locally for the work etc. complete. (Depth upto 3m). Hard Rock-Any rock Excavation by using mechanical plants/machinery (KUWSDB 2019)			
	Basic rate		677	
	Add 10% For area weightage (Mangalore City)		67.7	
		Rate	744.70	Cum

4	KSRB 2.3 : Filling available excavated earth (excluding rock) in sides of foundations upto plinth in layers not exceeding 20 cms. in depth, compacting each deposited layer by ramming after watering with lead upto 50 m. and lift upto 1.5 m. including cost of all labour complete as per specifications. specification. No. KBS 2.9 (KPWD 18-19,SI.No.2.10,Pg No.7)			
	Basic rate		201	
	Add 10% For area weightage (Mangalore City)		20.1	
		Rate	221.10	Cum

5	KSRB 2.8 : Providing and Filling in foundation with granite / trap broken metal 100mm. and down size, with approved sand including hand packing, ramming, watering, including cost of all materials and labour with all lead and lift. complete as per specifications. specification. No. KBS (KPWD 18-19,SI.No.2.15,Pg.No.7)			
	Basic rate		2541	
	Add 10% For area weightage (Mangalore City)		254.1	
		Rate	2795.10	Cum

6	KSRB 4-1.6 ; Providing and laying in position plain cement concrete of Mix 1:2:4 with OPC @ 240kgs, with 20mm and down size graded granite metal coarse aggregates @ 0.878 cum and fine aggregates @ 0.53cum, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation, plinth and cills, including cost of all materials, labour, HOM curing complete as per specifications. Specification No. KBS 4.1, 4.2 (KPWD 18-19,SI No.4.6,Pg.No.13)			
	Basic rate		5900	
	Add 10% For area weightage (Mangalore City)		590	
		Rate	6490.00	Cum

7	KSRB 4.2.1 Providing and laying in position reinforced cement concrete of Design Mix M25 with OPC@ 340kgs, with 20mm and down size graded granite metal coarse aggregates @0.70 cum and fine aggregates @ 0.47cum, with super plasticisers@ 3 liters confirming to IS 9103-1999 reaffirmed-2008 at machine mixed, concrete laid in layers not exceeding 15 cms thick, vibrated for all works in foundation for footings, pedestals, retaining walls, return walls, walls (any thickness) including attached pilasters, columns pillars, posts, struts, buttresses, bed blocks, anchor blocks & plinths etc., including cost of all materials, labour, HOM curing, complete but excluding cost of reinforcement as per specifications. Specification No. KBS 4.1, 4.6 (KPWD 18-19,SI No.4.10,Pg.No.14)			
	Basic rate		6198	
	Add 10% For area weightage (Mangalore City)		619.8	
		Rate	6817.80	Cum

8	KSRB 4.2.7 Providing and laying in position reinforced cement concrete of design Mix M25 with OPC @ 340kgs, with 20mm and down size graded granite metal coarse aggregates @0.70cum and fine aggregates @ 0.47cum, with super plasticisers @31ts confirming to IS9103-1999 Reaffirmed-2008, machine mixed, concrete laid in layers not exceeding 15 cms thick, vibrated for all works in ground floor level for roof slabs, staircase, lintels and beams retaining walls, return walls, walls (any thickness) including attached pilasters, columns, lintels, pillars, posts, struts, buttresses, string or lacing courses, parapets, coping, bed blocks, anchor blocks, plain window cills, fillets etc., including cost of all materials, labour, HOM curing, complete but excluding cost of reinforcement as per specifications. Specification No. KBS 4.1, 4.6 (KPWD 18-19,SI.No.4.12,Pg No.14)			
	Basic rate		6431	
	Add 10% For area weightage (Mangalore City)		643.1	
		Rate	7074.10	Cum

9	KSRB 4-6.1 : Providing and removing centering, shuttering, strutting, propping etc., and removal of form work for foundations, footings, bases of columns for mass concrete including cost of all materials, labour complete as per specifications. Specification No. KBS 4.6.2 (KPWD 18-19,SI.No.4.28,Pg No.16)			
	Basic rate		263	
	Add 10% For area weightage (Mangalore City)		26.3	
		Rate	289.30	Sqm

10	KSRB 4-6.4 : Providing and removing centering, shuttering, strutting, propping etc., and removal of form work for vertical surface such as walls at any thickness, including attached pilasters, buttresses, plinth cills and string courses cost of all materials, labour complete as per specifications. Specification No. KBS 4.6.2			
	Basic rate		361	
	Add 10% For area weightage (Mangalore City)		36.1	
		Rate	397.10	Sqm

11	KSRB 4-6.2 : Providing and removing centering, shuttering, strutting, propping etc., and removal of formwork for suspended floors, landings, balconies and likes, thickness upto 200 mm including cost of all materials, labour complete as per specifications. Specifications No. KBS 4.6.2			
	Basic rate		408	
	Add 10% For area weightage (Mangalore City)		40.8	
		Rate	448.80	Sqm

12	KSRB 4.9.2 : Providing T.M.T steel reinforcement for R.C.C work including straightening, cutting, bending, hooking, placing in position, lapping and I or welding wherever required, tying with binding wire and anchoring to the adjoining members wherever necessary complete as per design (laps, hooks and wastage shall not be measured and paid) cost of materials, labour, HOM complete as per specifications. Specification No. KBS 4.6.3 TMT bars Fe 500 (KPWD 18-19,Sl.No.4.46.2,Pg No.18)			
	Basic rate		70782	
	Add 10% For area weightage (Mangalore City)		7078.2	
		Rate	77860.20	MT

13	Providing fusion bonded epoxy coating not less than 175 microns thickness and upto 300 microns to reinforcement of all diameters as per IS: 13620-1993 including testing of coating at plant The rate is inclusive of cost on account of careful handling, PVC coated binding wire instead of GI Binding wire, touch up material supplied by coating agency, repair work, loading, unloading and straightening of bent rods etc., complete as per specification and as directed by the Engineer in charge. do For 10mm to 16mm dia bars			
	Ground Floor			
	Basic rate		10535	
	Add 10% For area weightage (Mangalore City)		1053.5	
		Rate	11588.50	MT

14	Providing external walls with texture finish using approved brand paint, applied uniformly in three coats over one coat of primer including cost of all materials, machineries, labour, transportation, loading and unloading, all lead and lift and all other incidental charges including scaffolding and removing stains, complete as per specifications. (KPWD 18-19,Sl.No 15.103.Pg No.127)			
	Basic rate		340	
	Add 10% For area weightage (Mangalore City)		34	
		Rate	374.00	Sqm

15	KSRB15-3 : Providing 15mm thick cement plaster in single coat with cement mortar to brick masonry including rounding off corners wherever required smooth rendering, Providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications. KSRB15-3.5 : -do - cement mortar 1:4			
	Basic rate		222	
	Add 10% For area weightage (Mangalore City)		22.2	
		Rate	244.20	Sqm

16	Providing and fixing food grade epoxy painting to over head tank,under ground tank and sump tank after cleaning and drying including pumping and bailing out of water, including cost of all materials labour lead and lifts etc., complete (KPWD 18-19,Sl.No.10.6,Pg.No.69)			
	Basic rate		88	
	Add 10% For area weightage (Mangalore City)		8.8	
		Rate	96.80	Sqm

17	Waterproofing of RCC Terrace I podium slab I toilet I utilities I water retaining structure by preparing the surface by chipping and cleaning and Grouting of Honey comb, voids,cracks I construction joints with cement slurry (1kg cement added in 10 ltr of water) added with 100gm of inorganic accelerator, followed by spraying of liquid biological modified alkaline earth silicates@ 040 ltr per sqm on whole surface to reduce the micro porosity and allowing it to dry, curing the surface for the silicates to penetrate deeper into the concrete and spraying waterproofing impregnate liquid containing silane and silanollinear copolymer@ 0.50 ltr per sqm and finally applying polymer slurry made out of cross linked acrylic I styrene I butadiene & cement in the ratio of 1:0.1, @ 0.50kgsqm on the whole surface, including all labour charges tools and equipments, all complete as per the specification (KPWD 18-19,Sl.No.10.5.1,Pg.No.69)			
	Basic rate		526	
	Add 10% For area weightage (Mangalore City)		52.6	

		Rate	578.60	Sqm
18	Providing and laying integral cement based treatment for water proofing on the vertical surface by fixing specified stone slab 22 mm to 25 mm thick with cement slurry mixed with water proofing compound conforming to IS:2645 in recommended proportions with a gap of 20 mm (minimum) between stone slabs and the receiving surfaces and filling the gaps with neat cement slurry mixed with water proofing compound and finishing the exterior of stone slab with cement mortar 1:3 (1 cement : 3 coarse sand) 20 mm thick with neat cement punning mixed with water proofing compound in recommended proportion complete at all levels and as directed by Engineer-in-charge. Using rough Kota stone (CPWD 2019,22.2)			
	Basic rate		1738	
		Rate	1738.00	Sqm
19	Providing and fixing in position pre-cast R.C.C. manhole cover and frame of required shape and approved quality.HD-20 Circular shape 600 mm internal dia. (CPWD 19,19.19.4.1)			
	Basic rate		1471.5	
		Rate	1471.50	Nos.
20	Providing M.S. foot rests including fixing in RCC tank with 20x20x10 cm cement concrete blocks 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) as per standard design : With 20 mm diameter round bar (CPWD 19.15.2)			
	Basic rate		383.7	
		Rate	383.70	Nos.
21	Extra Lead for Disposing off unserviceable materials upto 10 Km beyond initial Lead of 5 km Item No 17.4 KSRRB M100-4.1-Earth			
	Earth	2.0x1.28x10km		
	Basic rate		25.60	
	Add Loading and unloading charges(Item No 17.1 KSRRB M100-1)		57.00	
	Sub Total		82.60	
	Add 10% For area weightage (Mangalore City)		8.26	
		Rate	90.86	Cum

**Assistant Engineer
MSCL Mangaluru**

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**General Manager Technical
MSCL Mangaluru**