

BILL OF QUANTITY - CIVIL WORK					
Client		MADHYA PRADESH INDUSTRIAL DEVELOPMENT CORPORATION			
Name of work		UPGRADATION WORK AT INDUSTRIAL AREA HATOD TEHSIL DHAR DIST.			
Consultant		M/S, AADINATH CONSTRUCTION , INDORE			
SOR		MPPWD ROAD & BRIDGE SOR 11.04.2025 AND AMMND UPTO DATE , MPPWD Building Vol 1 & 2 Dated 01.01.2024 , MPPHE SOR 01.09.2023			
Tender Amount		19.99 Cr.			
S. N	ITEM No	Particulars	Unit	Quantity	Rate
1	MPPWD _Road & Bridge_2.2	Clearing and Grubbing Road Land Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees having girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material up to a lead of 1000 meters including removal and disposal of top organic soil not exceeding 150 mm in thickness.			
	A	In area of light jungle	Hectare	6.52	29409.00
2	MPPWD _Road & Bridge_2.7	Dismantling Kerb Stone			
		Dismantling kerb stone by manual means and disposal of dismantled material with all lifts and up to a lead of 1000 meter	meter	8694.00	15.00
3	MPPWD _Road & Bridge_ 12.1	Excavation for Structures Earth work in excavation of foundation of structures as per drawing and technical specification, including setting out, construction of shoring and bracing, removal of stumps and other deleterious matter, dressing of sides and bottom as per relevant clauses of section 300 & 2100 in			
	(I)	Ordinary soil (including back filling with approved material) Depth upto 3 m	cum	3393.12	79.00
	II	Ordinary Rock (not requiring blasting) Depth upto 3 m	cum	549.70	239.00
	(III)	Hard rock (requiring blasting)	cum	37.42	297.00

S. N	ITEM No	Particulars	Unit	Quantity	Rate
4	MPPWD_Road & Bridge_ 12.6	Providing and laying Plain/Reinforced cement concrete in open foundation including form work shuttering etc. complete as per drawing and technical specifications and as per relevant clauses of sections 1500, 1700 & 2100 with.			
	(i)	Concrete with plant (Drum Type) and placing			
		PCC Grade M15	cum	367.20	3925.00
		PCC Grade M20	cum	28.82	4083.00
		RCC Grade M20	cum	4181.30	4110.00
5	MPPWD_Road & Bridge_ 13.8	Back filling behind abutment, wing wall and return wall complete as per drawing and Technical specification and as per relevant clauses 305 of specifications and as per appendix 6 of IRC-78.			
	A	Granular material			
		As per estimate	cum	877.11	771.00
6	MPPWD_Road & Bridge_ 13.7	Providing weep holes in Brick masonry/Plain/Reinforced concrete abutment, wing wall/return wall with 100 mm dia AC pipe, extending through the full width of the structure with slope of 1V :20H towards drawing face. Complete as per drawing and Technical specifications.	Meter	2353.20	174.00
7	MPPWD ROAD & Bridge 4.3	Wet Mix Macadam			

S. N	ITEM No	Particulars	Unit	Quantity	Rate
		Providing, laying, spreading and compacting graded stone aggregate to wet mix macadam specification including premixing the Material with water at OMC in mechanical mix plant carriage of mixed Material by tipper to site, laying in uniform layers with paver in sub- base / base course on well prepared surface and compacting with vibratory roller to achieve the desired density in accordance to Table No. 400-12, 400-13 and as per clause of section 406 of specifications.			
	A	By Sensor Paver	cum	1124.80	1451.00
8	MPPWD _Road & Bridge_5.3	Providing and applying tack coat with cationic bitumen emulsion using emulsion pressure distributor on the prepared bituminous/granular surface cleaned with mechanical broom and as per relevant clauses of section-503 of specifications.			
	(ii)	@0.30 kg per sqm (dry & hungry bituminous surfaces/Granular surfaces treated with primer)	sqm	19943.28	15.00
9	MPPWD ROAD & Bridge 5.6	Dense Graded Bituminous Macadam Providing and laying dense bituminous macadam using crushed aggregates of specified grading, premixed with bituminous binder @ 4.0 to 4.5% by weight of total mix of mix and filler, transporting the hot mix to work site, laying with a Electronic Sensor paver finisher with sensor control to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per clause 505 of specification complete in all respects.			
	b	Using Drum Mix Plant of appropriate capacity.			
	(iv)	for Grading II (26.5 mm nominal size) Bitumen Content minimum 4.5% with bitumen 60/70 (VG 30)	cum	168.54	7759.00

S. N	ITEM No	Particulars	Unit	Quantity	Rate
10	MPPWD_Road & Bridge_5.7	Bituminous Concrete Providing and laying bituminous concrete using crushed aggregates of specified grading, premixed with bituminous binder @ 5.4 to 5.6 % by weight of total mix of mix and filler, transporting the hot mix to work site, laying with an Electronic Sensor paver finisher with sensor control to the required grade, level and alignment, rolling with smooth wheeled, vibratory tandem and pneumatic tyre rollers to achieve the desired compaction as per clause 507 of specification.			
	B	Using Drum Mix Plant of appropriate capacity.			
	(v)	for Grading-II (30-40 mm thickness) Bitumen Content minimum 5.4% with 60/70 bitumen (VG-30)	cum	3894.46	9260.00
11	MPPWD_Road & Bridge_4.16	Construction of Shoulders with approved material/selected soil i/c excavation all lifts & leads i/c grading to required slope & camber of 4% and compacting on OMC using vibratory roller of 80 to 100 kN static weight. Field compaction shall be done in corresponding layers of carriage way thickness and meet the requirements of MDD to achieve compaction (98% -100%) as per relevant clause of 408.			
	A	Hard Shoulders (CBR value >12)	cum	3542.30	398.00

S. N	ITEM No	Particulars	Unit	Quantity	Rate
12	MPPWD _Road & Bridge_8.38	"Providing and applying (Cleaning of Bituminous surface) thermoplastic compound having composition of binder (Resin) minimum 18 %, titanium dioxide minimum 10 % and intermixed glass bead, minimum 30% of brand like Asian, Burger or equivalent make of 2.5 mm thick including drop down reflectorizing, glass beads @ 250 gms per sqm area thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC:35.The finished surface to be level, uniform and free from streaks and holes, all complete as per clause 803 of specifications. Note: - The guarantee of Thermoplastic should be minimum 3 Years. "	Sqm	4480.10	440.00
13	MPPWD _Road & Bridge_8.24	Solar powered Road Marker (Solar Stud)			

S. N	ITEM No	Particulars	Unit	Quantity	Rate
		Supplying and fixing solar raised Pavement markers made of polycarbonate molded body with circular shape, solar powered, LED self Illumination in active mode, 360-degree Illumination and reflective panels with micro prismatic lens capable of providing total internal reflection of the light entering the lens face in passive mode. The marker shall support a load of 20000 kg tested in accordance to ASTM D 4280, The marker should be resistant to dust and water ingress according to IP 65 standards and should withstand temperatures in the range of 0 c to 70 c color of lighting could be provided in red or yellow (amber) as per requirement and typical frequency of blinking is 1Hz. There should be current losses of less than 20 microamperes at 2.4 v in sleep charging mode to enhance the life of the marker and a full charge should provide for a minimum autonomy of 50 hours. The height width and length of the marker shall not less than 10 mm x 100 mm x 100 mm. Also, the surface diameter of the marker shall not be less than 100 mm respectively. The weight of the marker shall not exceed 0.5 kilograms fixing will be by drilling holes on the road for the shanks to go inside, without nails and using epoxy resin based adhesive and complete as directed by the engineer. (Make- 3M /AVERY DENNISON/ ORAFOL / ALCOLITEA)	Each	506.67	1771.00
14	MPPWD _BUILDING VOL. II_28.2	Supplying and stacking of good earth specific useful for plantation at site including royalty if any and carriage (earth measured in stacks will be reduced by 20% for payment).			
		As per estimate	Cum	1364.10	511.00
15	MPPWD _BUILDING VOL. II_28.4	Supplying and stacking at site dump manure from approved source, including carriage (manure measured in stacks will be reduced by 8% for payment) :			
		As per estimate	Cum	557.64	734.00
16	MPPWD _BUILDING VOL. II_28.8	Spreading of sludge, dump manure and / or good earth in required thickness as per direction of Engineer-in-charge (Cost of sludge, dump manure and / or good earth to be paid separately).			

S. N	ITEM No	Particulars	Unit	Quantity	Rate
		As per estimate	Cum	1921.74	16.00
17	MPPWD _BUILDING VOL. II 28.9	Mixing earth and sludge or manure in the required proportion specified or directed by the Engineer-in-charge			
		As per estimate	Cum	1921.74	11.00
18	MPPWD_Road & Bridge_11.10	Planting of Trees and their Maintenance for Five Year Planting of various varieties such as Pipal (Ficus religiosa), Bargad (Ficus benghalensis), Neem (Azadirachta indica), Ashok (Saraca Asoca), Kadam (Neolamarckia cadamba), Aam (Mango), Gulmohar (Delonix regia), Amaltass (Hibiscus rosa-sinensis), Bougainvillea (Bougainvillea glabra), Lantana (Lantana camara) etc. of trees as approved by the Engineer-in-charge 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, and maintaining the plants excluding tree guard.			
		Note:-(i) Payment shall be made First year 30% Second year 10% third year 10 % fourth year 10% and fifth year 40% for DLP Five Years for the plants survive at that time. Shall be deducted for plants found dead after Five Years.			
	(i)	Minimum Plant Height 1.00 M			
		At Median	each	552.00	3250.00
19	MPPWD_Road & Bridge_ 11.22	Tree Guard with MS Angle Iron and Steel Wire Providing and fixing tree guard 0.60 metre square, 2.00-metre high fabricated with MS angle iron 30 x 30 x 3 mm, MS iron 25 x 3 mm and steel wire 3 mm dia welded and fabricated as per design in two halves bolted together.			
		At Median	each tree guard	552.00	1975.00

S. N	ITEM No	Particulars	Unit	Quantity	Rate
20	MPPWD_Road & Bridge_11.8	Planting Permanent Hedges including Digging of Trenches Planting permanent hedges including digging of trenches, 60 cm wide and 45 cm deep, refilling the excavated earth mixed with farmyard manure, supplied at the rate of 4.65 cum per 100 metres and supplying and planting hedge plants at 30 cm apart.			
		At Median	meter	2173.50	219.00
21	MPPWD Road & Bridge 8.56	Providing and fixing of Rumble Strip made up of TPU polyurethane (PU) Material size 500L x 100W x 15H mm and fixing of Rumble Strip in Bituminous grout/ Epoxy and Screwing the same with M.S Screw 15 x100mm etc. i/c removing asphalt at the site, Material, labour for fixing grouting and for controlling traffic during fixing etc. complete.	RM	308.00	1650.00
22	MPPWD_Road & Bridge_ 8.35	Cable Duct Across the Road 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:98-2011, 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 - 2011 and approved drawings.			
	(i)	Single Row for one utility service	Meter	496.86	1900.00

S. N	ITEM No	Particulars	Unit	Quantity	Rate
23	MPPWD_Road & Bridge_ 8.23	Road Markers/Road Stud with Lense Reflector			
		"Providing and fixing single mound twin shanked molded Road Markers/Road Stud made of poly carbonate or ABS body and shall support a load of 13635 Kg tested in accordance to ASTM D 4280 and complying lo specifications of Section-5 of IRC:35-2015 and clause 804.2.2 of MORT&H and Section-5 of IRC:35-2015. he reflecting panels shall consist of number of lenses containing single or dual prismatic cubes capable of providing total internal reflection of the light entering the lens face. The slope or retro-reflecting surface should be 35 + 5 degree to base. The reflective marker shall be fixed to the road surface using the epoxy/ adhesives and the procedure recommended by the manufacturer. No nails shall be used to affix the markers so Cubes capable of that they do not pose safety hazard on the road. The contractor shall submit a two-year replacement warranty. for satisfactory field performance including stipulated retro reflectance of the reflecting panel. (Make- 3M /AVERY DENNISON/ ORAFOL /	Each	3325.00	309.00
24	MPPWD ROAD & Bridge 3.3	Excavation in Soil using Hydraulic Excavator and Tippers with disposal up to 1000 meters. Excavation for roadwork in soil with hydraulic excavator including cutting and loading in tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and transporting suitable earth to the embankment location and disposing off unsuitable earth with all lifts and lead up to 1000m as per relevant clauses of section-300 of specification.	Cum	1006.62	79.00

S. N	ITEM No	Particulars	Unit	Quantity	Rate
25	MPPWD ROAD & Bridge 3.4	Excavation in Ordinary Rock using Hydraulic Excavator and Tippers with disposal up to 1000 meters. Excavation for roadway in ordinary rock with hydraulic excavator including cutting and loading in tippers, transporting to embankment site with in all lifts and lead up to 1000 m, trimming bottom and side slopes in accordance with requirements of lines, grades and cross sections as per relevant clauses of section-300 of specification.	Cum	1509.92	177.00
26	MPPWD ROAD & Bridge 3.14	Construction of Embankment with Material Deposited from Roadway Cutting : Construction of embankment with approved materials having CBR>7 deposited at site from roadway cutting and excavation from drain or foundation of structures graded and compacted to meet requirement of table 300-1, 300-2 and as per relevant clauses of section-300.	Cum	2013.23	60.00
27	MPPWD ROAD & Bridge 3.13	Embankment/ Sub Grade Construction with Material Obtained from Borrow Pits : Construction of embankment with approved material having CBR>7 obtained from borrow pits with all lifts and leads, transporting to site, spreading, grading to required slope and compacting to meet requirement of table 300-1, 300-2 and as per relevant clauses of section-300.	Cum	36.81	298.00
28	MPPWD ROAD & Bridge 4.2	Crusher Run Macadam Sub Base/Base Course Providing crushed stone aggregate, depositing on a prepared surface by hauling vehicles, spreading and mixing with a motor grader, watering and compacting with a vibratory roller as per clause 410 to form a layer of sub-base/Base in accordance to Table No. 400-14, 400-15 and as per clause of section 407 of specifications.			

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	(ii)	For 37.5 mm maximum size	Cum	1524.92	1198.00
29	MPPWD ROAD & Bridge 5.1	Prime Coat Over WMM/WBM			
	(i)	Providing and applying primer coat with catonic bitumen emulsion on prepared surface of granular Base including cleaning of road surface and spraying primer at the rate of 0.70 to 1.00 kg/sqm using mechanical means as per clause 502 of specifications.	sq.m.	3227.28	44.00
30	MPPWD ROAD & Bridge 8.3	Retro- reflectorised Traffic signs Providing and fixing of retro-reflectorised cautionary, mandatory and informatory sign board as per IRC 67-2022 made of high intensity Micro-Prismatic Grade Sheeting (Type IV) vide IRC: 67:2022 clause 6.7.3.2 and clause 801.3.3 of MoRT &H fixed over Aluminum composite material sheet with thermoplastic core of Low density polyethylene (LDPE) between two thick skins/sheets of aluminum with overall thickness of 4mm and aluminum skin of thickness 0.3 on both side, the ACM shall conform to Table 6.1 of IRC:67:2022 and Table 800-1 of MoRT &H specification and High Intensity Micro Prismatic Grade Sheeting shall conform to Table 6.6 of IRC:67:2022 and Table 800-3 of MoRT &H specification of in the clause 6.8 of the IRC 67-2022 and clause 801.3.7 of MoRT&H message legend numerical letter etc. and borders shall be screen printed on high intensity micro prismatic sheeting shall conform to clause 801.3.7 with digital printing ink or of cutout from transparent durable overlay or cutout from the same type of reflecting sheeting for cautionary/ mandatory/ signs, supported on MS sign post of size 75mm x75mm x 6mm of 3.60 meter over all length and fix to ground by means of properly designed			

S. N	ITEM No	Particulars	Unit	Quantity	Rate
		The ACM sheet shall be fixed to the post with four minimum four number breakaway bolts. & supported with a back-support frame of 25mmx25mmx3mm angle. 7 years warranty for Retro Reflection Sheeting to be provided from the original sheeting manufacture brand like 3M/Avery Dennison/ Orafol Make as per clause 6.9 of IRC: 67:2022 & a certified copy for three years for outdoor exposure report from an independent test lab as per clause 6.7 of IRC: 67:2022 for the product offered shall be submitted by the contractor. Note: - Manufacture name and date of manufacture is to be printed (Embossed) at the backside of the board.			
	(x)	80 cm x 60 cm rectangular	Each	1.00	5391.00
	(xii)	60 cm x 45 cm rectangular	Each	1.00	3994.00
31	MPPWD ROAD & Bridge 9.6	Providing concrete craddle bedding in M-15 grade concrete as per clause 2900 and as per section 1700 and 2900.	Cum	28.12	4225.00
32	MPPWD ROAD & Bridge 9.7	Deduction for not providing the first-class bedding (in case sand is available in the bed or the concrete craddle is provided as per item 9.6 above) in item No.9.2., 9.3, 9.4 & 9.5 above.	Cum	-28.12	514.00
33	MPPWD ROAD & Bridge 9.3	Providing and Laying Reinforced Cement Concrete Pipe NP 4 /prestressed concrete pipe on first class bedding in double row. Providing and Laying Reinforced cement concrete pipe NP4 /prestressed concrete pipe for culverts on first class bedding of granular material (cost of bedding included) in double row including fixing collar with cement mortar 1:2 but excluding excavation, protection works, backfilling, concrete and masonry works in head walls and parapets.			

S. N	ITEM No	Particulars	Unit	Quantity	Rate
	B	1000 mm pipe diameter	Rm	17.50	13621.00
34	MPPWD ROAD & Bridge 16.5	Providing and laying suitable designed Filter material underneath pitching in slopes complete as per drawing and Technical specification	cu.m	18.00	1591.00
35	MPPWD ROAD & Bridge 16.4	Providing and laying Pitching on slopes laid over prepared filter media including boulder apron laid dry in front of toe of embankment complete as per drawing and Technical specifications			
	A	Stone/Boulder	cu.m	24.00	2351.00
36	MPPWD ROAD & Bridge 13.1	Plain/Reinforced cement concrete in sub-structure complete as per drawing and technical specifications			
		Concrete with plant (Drum Type) and placing			
	A	PCC Grade M15	cu.m	24.30	3980.00
37	MPPWD Road & Bridge 9.15	Construction of RCC drain 1.0m x 1.0m inside dimension lined with 150 mm thick RCC, M-20 side walls, 150 mm thick RCC M-20 bottom slab, over 100 mm thick (Av.) levelling course in PCC M-15 including excavation, dressing of sides and bottom, provision of HYSD reinforcement consisting of 8 mm dia horizontal bars @ 200 mm c/c and U-shaped 10 mm dia vertical bars @ 120 mm c/c including cutting, bending and binding wire, placing in position, with shuttering, Weep holes at drainage layer level and concreting by using concrete mixer, compaction by vibration etc complete as per direction of the engineer in charge.	Rm	4412.00	4011.00
38	MPPWD Road & Bridge 13.4	Supplying, fitting and placing HYSD bar reinforcement in substructure complete as per drawing and technical specifications and as per relevant clause of section-1600			
		FE 500	MT	216.67	67395.00

S. N	ITEM No	Particulars	Unit	Quantity	Rate
39	PHE SOR 28.5	Providing and laying non-pressure (NP4) RCC socket & spigot pipes with rubber gasket joint including testing of joints.			
	28.5.5	450 mm dia	meter	1140.00	2869.00
	28.5.7	600 mm dia	meter	1307.00	4413.00
	28.5.9	800 mm dia	meter	2056.50	6801.00
40	MPPWD BUILDING VOL. II - 19.9	Constructing brick masonry manhole in cement mortar 1:4 (1 cement : 4 sand) R.C.C. top slab with Cement Concrete 1:2:4 mix (1 cement : 2 sand : 4 graded stone aggregate 20 mm nominal size), foundation concrete 1:2:4 mix (1 cement : 2 sand : 4 graded stone aggregate 20mm nominal size) inside plastering 12mm thick with cement mortar 1:3 (1 cement : 3 sand) finished with floating coat of neat cement and making channels in			
	19.9.1	Inside size 90x80 cm and 45 cm deep including C.I. cover with frame (light duty) 455x610 mm internal dimensions total weight of cover and frame to be not less than 38 kg (weight of cover 23 kg and weight of frame 15 kg) :			
	19.9.1.1	With well burnt bricks	Each	10.00	7997.00
	19.9.2	Inside size 120x90 cm and 90 cm deep including C.I. cover with frame (medium duty) 500 mm internal diameter, total weight of cover and frame to be not less than 116 kg (weight of cover 58 kg and weight of frame 58 kg) :			
41	19.9.2.1	With well burnt bricks	Each	36.00	18086.00
42	MPPWD BUILDING VOL. II - 19.10	Extra for depth for manholes			
	19.10.1	Size 90x80 cm			
	19.10.1.1	With well burnt bricks	meter	34.50	6176.00

S. N	ITEM No	Particulars	Unit	Quantity	Rate
43	Road & Bridge 9.16	Construction of RCC drain 0.75 m x 0.75 m inside dimension lined with 135 mm thick RCC, M-20 side walls, 135 mm thick RCC M 20 bottom slab, over 100 mm thick (Av.) levelling course in PCC M-15 including excavation, dressing of sides and bottom, provision of HYSD reinforcement consisting of 8 mm dia horizontal bars @ 200 mm c/c and U-shaped 10 mm dia vertical bars @ 150 mm c/c including cutting, bending and binding wire, placing in position, with shuttering. Weep holes at drainage layer level and concreting by using concrete mixer, compaction by vibration etc complete as per direction of the engineer in charge.	Rm	9500.00	2773.00
44	MPPWD Road & Bridge 9.17	Construction of RCC drain 0.60 m x 0.60 m inside dimension lined with 120 mm thick RCC, M-20 side walls, 120 mm thick RCC M 20 bottom slab, over 100 mm thick (Av.) levelling course in PCC M-15 including excavation, dressing of sides and bottom, provision of HYSD reinforcement consisting of 8 mm dia horizontal bars @ 200 mm c/c and U-shaped 8 mm dia vertical bars @ 150 mm c/c including cutting, bending and binding wire, placing in position, with shuttering, Weep holes at drainage layer level and concreting by using concrete mixer, compaction by vibration etc complete as per direction of the engineer in charge.	Rm	10463.00	2132.00
45	MPPWD Road & Bridge 10.54	Rainwater Harvesting with brick masonry 0.2 m thick perforation with PVC pipe 100mm dia @ 0.50 m centre to centre all around the recharge pit including excavation upto 2.00 m depth with bore hole 150 mm dia and 15 m depth filled with gravels 3-6 mm size, recharge pit filled boulder 5-20 cm and 0.5 m depth. over the boulders layer gravel 5-10 mm size depth 0.5 m, over the gravels layer core sand 0.5 m depth.			

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	ii	1.50 m x 2.00 m	Each	10.00	44300.00
46	PHE SOR 27.2	Providing of DWC/ PE (Earlier HDPE) Pipes of renowned manufacturer duly tested and inspected i/c transportation charges, transit insurance, loading/unloading and stacking at site/ store etc, complete.			
		Internal dia /Outer dia			
	27.2.11	800 mm / 950 mm	m	688.00	7971.00
47	PHE SOR 27.3	Laying and jointing of DWC /PE (HDPE) Pipes of renowned manufacturer duly tested, and inspected i/c transportation charges, transit insurance, loading/unloading and stacking at site/ store etc, complete.			
		Internal dia /Outer dia			
48	27.3.11	800 mm / 950 mm	m	688.00	206.00
49	MPPWD BUILDING VOL.- I 6.37	Brick work with fly ash lime bricks (FALG Bricks) conforming to IS:12894-2002,			
	6.37.3	Having 50 kg / cm ² average compressive strength.			
	6.37.3.1	Cement mortar 1:4 (1 cement : 4 sand)	Cum	214.32	4900.00
50	MPPWD BUILDING VOL.- I 13.1	12 mm cement plaster of mix :			
	13.1.2	1:6 (1 cement : 6 sand)	Sqm	1390.73	160.00
51	MPPWD BUILDING VOL - I 13.10	Neat cement punning			
		As per estimate	Sqm	1278.09	30.00

S. N	ITEM No	Particulars	Unit	Quantity	Rate
52	MPPWD BUILDING VOL. I 2.6	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means over areas (exceeding 30cm in depth. 1.5m in width as well as 10 sqm on plan including dressing of sides and ramming of bottom disposal of excavated earth, lead up to 50m and lift up to 1.5m, disposed earth to be levelled and neatly dressed. (No extra lift is payable if work is done by mechanical means) All kinds of soil	cum	267.03	147.00
53	MPPWD BUILDING VOL. I 2.7	Earth work in excavation/ by mechanical means (Hydraulic Excavator)/ manual means over areas (exceeding 30 cm in depth, 1.5m in width as well as 10 sqm on plan) including dressing of sides and ramming of bottom disposal of excavated earth, Note:- Excavation of hard rock shall be the property of the contractor subject to recovery. excavated material has to shift from site within 15 days after instruction issued by Engineer-InCharge otherwise after this penalty will imposed on contractor at the rate of Rs 50 per cum per day.			
	2.7.1	Ordinary rock	Cum	155.67	287.00
	2.7.2	Hard rock (requiring blasting)	Cum	181.71	519.00
54	MPPWD BUILDING VOL. I 2.42	Supplying and filling in Ground and embankment including watering ramming consolidating in layers not exceeding 20cm in depth and dressing complete.			
	2.42.1	Supplying and filing in plinth with soil (other than BC soil) having MDD not less than 1.85 t/m3 under floors including watering, ramming and compacting (minimum compaction 95% of MDD) in layers not exceeding 15cm depth and dressing complete.	Cum	8.63	331.00

S. N	ITEM No	Particulars	Unit	Quantity	Rate
55	MPPWD BUILDING VOL. I 4.1	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering All work up to plinthlevel.			
	4.1.1.3	Cement concrete grade M-15 (Nominal Mix) with 20mm maximum size of stone aggregate	Cum	72.16	4471.00
56	MPPWD BUILDING VOL. I 5.1	Providing and laying in position specified grade of reinforced cement concrete excluding the cost of centering, shuttering, finishing and reinforcement - All workup to plinth level :			
	5.1.1	M-20 Grade Concrete	Cum	182.28	6153.00
57	MPPWD BUILDING VOL. I 2.24	Filling available excavated earth (excluding hard rock/Ordinary rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift upto 1.5 m.	cum	105.79	95.00
58	MPPWD BUILDING VOL. I 5.9	Centering and shuttering including strutting, propping stretching etc.complete for and removal of form work by sheet plate or ply wood shuttering for:			
	5.9.1	Foundations, footings, bases of columns, etc. For mass concrete.	sqm	610.18	190.60
	5.9.3	Suspended floors, roofs, landings, balconies and access platform.	sqm	176.96	439.60
	5.9.9	Arches, domes,vaults upto 6m span	sqm	446.81	1141.60
	5.9.6	columns, P i l l a r s , Piers, Abutments, Posts and Struts.	sqm	999.96	471.20
	5.9.2.1	Above plinth level	sqm	511.51	219.00

S. N	ITEM No	Particulars	Unit	Quantity	Rate
60	MPPWD BUILDING VOL. I 5.16	Reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding including cost of binding wire all wastages and overlaps, couplers (overlaps shall be provided as per requirement of IS 13920 for ductile detailing IS 456 RCC Design & SP 34 Reinforcement detailing) etc. complete . (Note:- 1. Spacer bars (chairs) shall be paid separately as shown in the drawing and as per direction of engineer in charge. 2. No extra payment shall be done for overlaps and/or couplers. 3. Couplers shall be conforming to IS code on "Reinforcement Couplers for Mechanical Splices of Bars for Concrete Reinforcement - Specification")			
	5.16.6	Thermo-Mechanically Treated bars. FE 500 D or more conforming to IS 1786	KG	33482.73	80.00
61	MPPWD BUILDING VOL. I 5.2	Reinforced cement concrete work (with 20 mm nominal size graded stone aggregate) in walls (any thickness), including attached pilasters, buttresses, plinth and string courses, fillets, columns, pillars, posts and struts etc. above plinth level and upto floor two level excluding cost of centering, shuttering, finishing and reinforcement:			
	5.2.1	M-20 Grade Concrete	cum	162.86	6231.00

S. N	ITEM No	Particulars	Unit	Quantity	Rate
62	MPPWD BUILDING VOL. I 6.26	Providing and laying Autoclaved Aerated Concrete (AAC) blocks masonry, using AAC blocks (Size length 300, 400, 500, 600 mm Height 200, 250, 300 mm Width 100, 150, 200, 250 mm) conforming to IS 2185 PART 3, having compressive strength not less than 4MPa (Grade II) in super structure, blocks jointed with approved block laying polymer modified adhesive mortar as per ASTM 1660- 09, applied in uniform thickness of 2 to 3 mm in horizontal and verticals joints using special trowel, polymer modified mortar having minimum compressive strength and minimum splitting tensile strength of not less than 5MPa and 0.34 MPa respectively as per ASTM international standard including raking out joints. The surface of masonry units (AACBlock) should be slightly moist prior to application of jointing mortar. Block should be gently pressed down using a rubber mallet to expel out entrapped air and the masonry shall be cured two days. 1st layer of masonry block shall be placed on perfectly leveled surface, which if required, shall be leveled			
		along jams (vertical member of chowkhats) and extend upto lintel levels to arrest cracking at corner openings. RCC bands shall be measured with AAC block masonry. Rates include all materials including steel bars, wastages, RCC, Centering scaffolding and all labour etc. complete.			
	6.26.1	AAC Masonry in polymer modified mortar	cum	16.21	5500.00
63	MPPWD BUILDING VOL. I 13.8	6 mm cement plaster of mix: 1:3 (1cement:3 finesand)	Sqm	108.56	144.00
64	MPPWD BUILDING VOL. I 13.2	15 mm cement plaster on rough side of single or half brick wall of mix			

S. N	ITEM No	Particulars	Unit	Quantity	Rate
	13.2.2	1:6 (1cement:6 sand)	Sqm	3970.22	168.00
65	MPPWD BUILDING VOL. I 13.27	Providing and fixing mesh in vertical and horizontal junction of RCC and brick/AAC work including scaffolding and all lead and lift etc. complete			
	13.27.1	G.I. chicken mesh as per ISI specification and in the required width with 50mm long Bombay nails before plastering upt 10 meter height	Sqm	60.48	62.00
66	MPPWD BUILDING VOL. I 13.81	Providing and Applying Roto Wall finishing system being a dispersion of inorganic fillers, calcite, pure silica, quartz and broad spectrum fungicides stabilized by an acrylic co-polymer, to be applied by means of customized trowels (one for incorporating material on base and spreading and other for finishing) in single coat with a coating thickness of 2.0-2-2.5mm on a cured smooth level plaster without keying, by the approved applicator of manufacturer, of the approved shade as per directions for usage all inclusive including primer coat on the base.	sqm	255.26	324.00
67	MPPWD BUILDING VOL. I 13.41	Providing and applying white cement based putty of average thickness 1 mm, of approved brand over the plastered wall surface to prepare the surface even and smooth i/c all cost of material, labour and scaffold etc in all position complete. Note : Putty shall be applied only on the internal walls, for application on the exterior walls prior permission of Chief Engineer will be required.	Sqm	275.68	74.00
68	MPPWD BUILDING VOL. I 13.67	Applying priming coats with primer of approved brand and manufacture, having low VOC (Volatile Organic Compound) content.			

S. N	ITEM No	Particulars	Unit	Quantity	Rate
	13.67.3	With water thinnable cement primer on wall surface having VOC content less than 50 grams/litre.	Sqm	221.20	24.00
69	MPPWD BUILDING VOL. I 13.49	Wall painting by any mechanical or manual means with premium acrylic emulsion paint of interior grade, having VOC (Volatile Organic Compound) content less than 50 grams/ litre. of approved brand and manufacture, including applying additional coats wherever required to achieve even shade.	Sqm	919.76	90.00
70	MPPWD BUILDING VOL. I 13.53	Finishing walls by any mechanical or manual means with Premium Acrylic Smooth exterior paint (Premium exterior) of required shade including all scaffolding. New work (Two or more coat applied @1.67ltr/10sqm over and including one coat undiluted exterior waterproofing coating @ 2.39 litre/10 sqm with crack bridging ability of upto 0.5mm on horizontal surfaces with an elongation of 150% and water proofing of upto 3 bars on vertical surface)	sqm	255.26	130.00
71	MPPWD BUILDING VOL. I 10.2	Structural steel work using M.S. flats, angles, channels I-section, H-section etc. 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	4745.11	103.00
72	MPPWD BUILDING VOL. I 13.65	Painting with synthetic enamel paint of approved brand and manufacture of required colour to give an even shade: Two or more coats on new work over an under coat of suitable shade with ordinary paint of approved brand and manufacture.	Sqm	99.30	77.00

S. N	ITEM No	Particulars	Unit	Quantity	Rate
72	MPPWD BUILDING VOL. I 9.169	Providing and fixing factory made single extruded WPC(Wood Polymer Composite) solid door/window/ceosetory windows and other frames/chowkhat comprising of virgin polymer of K value 58-60 (Suspension Grade), calcium carbonate and natural fibers (wood powder/ rice .husk/wheat husk) and non toxic additives (maximum toxicity index of 12 for 100 gms) fabricated with miter joints after applying PVC solvent cement and screwed with full body threaded star headed S.S. screws having minimum density of 750 kg/m3 and screw withdrawal strength of 2200 N (Face) & 900 N (Edge), minimum compressive strength 58 N/mm2, modulus of elasticity 900 N/ mm2 and resistance to spread of flame of Class A category with property of being termite/borer proof, water/moisture proof and fire retardant and fixed in position with M.S. hold fast/lugs/S.S.dash fasteners of required dia and length complete as per direction of Engineer-in-Charge. (M.S. hold fast/lugs or S.S. dash fasteners shall be paid separately)			
	9.169.2	Single rebate (100 mm X50 mm)	RM	16.20	720.00

S. N	ITEM No	Particulars	Unit	Quantity	Rate
73	MPPWD BUILDING VOL. I 9.171	Providing and fixing factory made single extruded WPC (Wood Polymer Composite) solid decorative type flush door shutter of required size comprising of virgin polymer of K value 58-60 (Suspension Grade), calcium carbonate and natural fibers (wood powder/ rice .husk/wheat husk) and non toxic additives (maximum toxicity index of 12 for 100 gms) having minimum density of 650 kg/cum and screw withdrawal strength of 1800 N (Face) & 900 N (Edge), minimum compressive strength 50 N/mm ² , modulus of elasticity 850 N/mm ² and resistance to spread of flame of Class A category with property of being termite/borer proof, water/moisture proof and fire retardant. WPC to be laminated with PVC foil of minimum 14 microns thick of approved design pasted with hot melt adhesive on both faces of shutter and fixing with stainless steel butt hinges of required size with necessary full body threaded star headed counter sunk S.S screws, all as per direction of Engineer-InCharge. (Note: stainless steel butt hinges and necessary S.S screws shall be			
	9.171.2	35 mm thick WPC (Wood Polymer Composite) solid decorative type flush door shutter	Sqm	21.00	4417.00
74	MPPWD BUILDING VOL. I 9.256	Providing and fixing Stainless steel tubular H handle bar (Grade 304) with SS screws etc .complete set as per direction of Engineer-in-Charge.			
	9.256.1	25 mm outer dia & 300 mm long	each set	22.00	984.00
75	MPPWD BUILDING VOL. I 9.57	Sliding door bolts :- Providing and fixing ISI marked oxidised M.S. sliding door bolts with nuts and screws etc. complete:			
	9.57.1	300x16 mm	each	14.00	170.00

S. N	ITEM No	Particulars	Unit	Quantity	Rate
76	MPPWD BUILDING VOL. I 9.58	Tower bolt : - Providing and fixing ISI marked oxidised M.S. tower bolt black finish, (Barrel type) with necessary screws etc. complete :			
	9.58.1	250x10 mm	each	3.00	68.00
77	MPPWD BUILDING VOL. I 9.89	Providing and fixing bright finished brass hanging type floor door stopper with necessary screws, etc. complete.			
			each	3.00	91.00
78	MPPWD BUILDING VOL. I 9.197	Providing and fixing factory made UPVC white colour sliding glazed window upto 1.50 m in height dimension comprising of UPVC multi-chambered frame with inbuilt roller track and sash extruded profiles duly reinforced with 1.60 ± 0.2 mm thick galvanized mild steel section made from roll forming process of required length (shape & size according to UPVC profile), appropriate dimension of UPVC extruded glazing beads and UPVC extruded interlocks, EPDM gasket, wool pile, zinc alloy (white powder coated) touch locks with hook, zinc alloy body with single nylon rollers (weight bearing capacity to be 40 kg), G.I fasteners 100 x 8 mm size for fixing frame to finished wall and necessary stainless steel screws etc. Profile of frame & sash shall be mitred cut and fusion welded at all corners, including drilling of holes for fixing hardware's and drainage of water etc. After fixing frame the gap between frame and adjacent finished wall shall be filled with weather proof silicon sealant over backer rod of			

S. N	ITEM No	Particulars	Unit	Quantity	Rate
		required size and of approved quality, all complete as per approved drawing & direction of Engineer-in-Charge. (Single / double glass panes, wire mesh and silicon sealant shall be paid separately) Note: - For UPVC frame, sash and mullion extruded profiles minus 5% tolerance in dimension i.e. in depth & width of profile shall be acceptable. Variation in profile dimension in higher side shall be accepted but no extra payment on this account shall be made.			
	9.197.2	Three track three panels sliding window with fly proof SS wire mesh (Two nos. glazed & one no. wire mesh panels) made of frame 92 x 44 mm & sash 32 x 60 mm both having wall thickness of 1.9 ± 0.2 mm and single glazing bead of appropriate dimension (Area of window upto 1.75 sqm).	Sqm	27.40	6880.00
79	MPPWD BUILDING VOL. II 21.3	Providing and fixing glazing in aluminium door, window, ventilator shutters and partitions etc. with EPDM rubber/ neoprene gasket etc. complete as per the architectural drawings and the directions of engineer-in-charge. (Cost of aluminium snap beading shall be paid in basic item) :			
	21.3.2	With float glass panes of 5.0 mm thickness (weight not less than 12.50 kg/sqm)	Sqm	29.85	948.00
80	MPPWD BUILDING VOL. I 9.43	Providing and fixing M.S. grills of required pattern in frames of windows etc. with M.S. flats, square or round bars etc. including priming coat with approved steel primer all complete.			
	9.43.1	Fixed to steel windows by welding.	kg	274.00	119.00

S. N	ITEM No	Particulars	Unit	Quantity	Rate
81	MPPWD BUILDING VOL. II 22.7	Providing and laying integral cement based water proofing treatment including preparation of surface as required for treatment of roofs, balconies, terraces etc consisting of following operations: a) Applying a slurry coat of neat cement using 2.75 kg/sqm. of cement admixed with water proofing compound conforming to IS. 2645 and approved by Engineer-in-charge over the RCC slab including adjoining walls upto 300mm height including cleaning the surface before treatment. b) Laying brick bats with mortar using broken bricks/brick bats 25 mm to 115mm size with 50% of cement mortar 1:5 (1 cement : 5 sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-Charge over 20 mm thick layer of cement mortar of mix 1:5(1 cement :5 sand) admixed with water			
		proofing compound conforming to IS : 2645 and approved by Engineer-in-Charge to required slope and treating similarly the adjoining walls upto 300 mm height including rounding of junctions of walls and slabs. c) After two days of proper curing applying a second coat of cement slurry using 2.75kg/ sqm of cement admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-Charge. d) Finishing the surface with 20 mm thick jointless cement mortar of mix 1:4 (1 cement: 4 sand) admixed with water proofing compound conforming to IS: 2645 and approved by Engineer-in-charge including laying glass fibre cloth of approved quality in top layer of plaster and finally finishing the surface with trowel with neat cement slurry and making pattern of 300x300 mm square 3mm deep. e) The whole terrace so finished shall be flooded with water for a minimum period of two weeks for curing and for final test. All above operations to be done in order and as directed and specified by the Engineer-in-Charge: (with 5 years service guarantee) With average thickness of 120mm and minimum thickness at khurra as 65 mm.	sqm	314.68	885.00

S. N	ITEM No	Particulars	Unit	Quantity	Rate
82	MPPWD BUILDING VOL. I 8.2	Aluminium structural glazing Designing, fabricating, testing, protection, installing and fixing in position semi (grid) unitized system of aluminum structural glazing (with open joints) for linear as well as curvilinear portions of the building for all heights and all levels. (A) Structural analysis and 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, aluminum 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 and drainage and protection against fire hazard including: B) Fabricating and supplying serrated M.S. hot dip galvanised / Aluminum alloy of 6005 T5 brackets of required sizes, sections and			

S. N	ITEM No	Particulars	Unit	Quantity	Rate
		(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 aluminum 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			

S. N	ITEM No	Particulars	Unit	Quantity	Rate
		Cost of testing is inclusive in the rates. Performance Testing of Structural glazing system Tests to be conducted in the NABL Certified laboratories (1) Performance Laboratory Test for Air Leakage Test (-50pa to – 300pa) and (+50pa to +300pa) as per ASTM E- 283-04 testing method for a range of testing limit 1 to 200 mVhr” (2) Static Water Penetration Test. (50pa to 1500pa) as per ASTM E- 331-09 testing method for a range upto 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 2000ml”			
			sqm	141.06	2674.00
83	MPPWD BUILDING VOL. I 8.7	Aluminum composite panel(ACP)			

S. N	ITEM No	Particulars	Unit	Quantity	Rate
		Designing, fabricating, testing, installing and fixing in position Curtain Wall with Aluminum Composite Panel (ACP) Cladding, with open grooves for linear as well as curvilinear portions of the building, for all heights and all levels etc. including: a) Structural analysis and design and preparation of shopdrawings for pressure equalisation or rain screen principle as required, proper drainage of water to make it watertight including checking of all the structural and functional design. b) Providing, fabricating and supplying and fixing panels of aluminum composite panel cladding in pan shape in metallic colour of approved shades. The aluminum composite panel cladding sheet shall be coil coated, with kynar 500 based PVDF / fluoropolymer resin coating of approved colour and shade on face # 1 and polymer (Service) coating on face # 2 as specified using stainless steel screws, nuts, bolts, washers, cleats, weather silicone sealant, backer rods etc.			

S. N	ITEM No	Particulars	Unit	Quantity	Rate
		Designing, fabricating, testing, installing and fixing in position Curtain Wall with Aluminum Composite Panel (ACP) Cladding, with open grooves for linear as well as curvilinear portions of the building, for all heights and all levels etc. including: a) Structural analysis and design and preparation of shopdrawings for pressure equalisation or rain screen principle as required, proper drainage of water to make it watertight including checking of all the structural and functional design. b) Providing, fabricating and supplying and fixing panels of aluminum composite panel cladding in pan shape in metallic colour of approved shades. The aluminum composite panel cladding sheet shall be coil coated, with kynar 500 based PVDF / fluoropolymer resin coating of approved colour and shade on face # 1 and polymer (Service) coating on face # 2 as specified using stainless steel screws, nuts, bolts, washers, cleats, weather silicone sealant, backer rods etc.			

S. N	ITEM No	Particulars	Unit	Quantity	Rate
		c) The fastening brackets of Aluminum alloy 6005 T5 / MS with Hot Dip Galvanised with serrations and serrated washersto arrest the wind load movement, fasteners, SS 316Pins and anchor bolts of approved make in SS 316, Nylonseparators to prevent bi-metallic contacts all complete required to perform as per specification and drawing The item includes cost of all material and labour component, the cost of all mock ups at site, cost of all samples of the individual componentsfor testing in an approved laboratory, field tests on the assembled working curtain wall with aluminum composite panel cladding, cleaning and protection of the curtain wall with aluminum composite panel cladding till the handing over of the building for occupation. Base frame work for ACP cladding is payable under the relevant aluminum items. The Contractor shall provide curtain wall with aluminum composite panel cladding, having all the performance characteristics all complete, as per theArchitectural drawings, as per item description, as			
		However, for the purpose of payment, only the actual area on the external faceof the curtain wall with Aluminum Composite Panel Cladding (including width ofgroove) shall be measured in sqm. upto two decimal places			
	8.7.1	4 mm thick aluminum composite pannel material consisting of 3 mm thick FR grade mineral core sandwiched between two aluminum sheets (each 0.5mm thick)	sqm	141.06	3800.00
84	MPPWD BUILDING VOL. II 15.31	Dismantling and stacking within 50 metres lead, fencing posts or struts including allearth work and dismantling ofconcrete etc. in base of :			
	15.31.2	R.C.C.	EACH	516.22	87.00

S. N	ITEM No	Particulars	Unit	Quantity	Rate
85	MPPWD BUILDING VOL. II 15.33	Dismantling barbed wire or flexible wire rope in fencing including making rolls and stacking within 50 metres lead.	kg	942.44	9.00
86	MPPWD BUILDING VOL. I 4.3	Centering and shuttering including strutting, propping etc. and removal of form work for :			
	4.3.1	Upto plinth: Foundations, footings, bases for columns, plinth beams, curtain walls, columns below plinth.	sqm	301.91	169.00
87	MPPWD BUILDING VOL. I 2.36	Banking\filling excavated earth in layers not exceeding 20cm in depth, breaking clods, watering rolling each layer with 1/2 tonne roller or wooden or steel rammers etc. and rolling every 3rd and top-must layer with power roller of minimum 8 tonnes and dressing up, in embankments for roads, flood banks, marginal bank and guide bank etc. lead upto 50m and lift upto 1.5m. All kinds of soil.	cum	95.37	80.00
88	MPPWD BUILDING VOL. I 6.7	Brick work with fly ash lime bricks (FALG Bricks) conforming to IS:12894-2002, in super structure above plinth level up to floor two level in :			
	6.7.3.2	Cement mortar 1:6(1 cement : 6 sand)	cum	284.36	4936.00
89	MPPWD BUILDING VOL. I 13.52	Finishing walls by any mechanical or manual means with Acrylic Smooth exterior paint (Economy Exterior) of required shade including all scaffolding. New work (Two or more coat applied @1.67ltr/10sqm over and including one coat undiluted exterior waterproofing coating @ 2.39 litre/10 sqm with crack bridging ability of upto 0.5mm on horizontal surfaces with an elongationof 150% and water proofing of upto 3 bars on vertical surface	sqm	4178.45	138.00

S. N	ITEM No	Particulars	Unit	Quantity	Rate
90	MPPWD BUILDING VOLI . 10.36	Providing and fixing concertina coil fencing with punched tape concertina coil 600 mm dia 10 metre openable length (total length 90 m), having 50 nos rounds per 6 metre length, upto 3 m height of wall with existing angle iron 'Y' shaped placed 2.4m or 3.00m apart and with 9 horizontal R.B.T. reinforced barbed wire, stud tied with G.I. staples and G.I. clips to retain horizontal, including necessary bolts or G.I. barbed wire tied to angle iron, all complete as per direction of Engineer in charge, with reinforced barbed tape(R.B.T.) / Spring core (2.5 mm thick) wire of high tensile strength of 165 kg/ sq mm with tape (0.52 mm thick) and weight 43.478 gm/ metre (cost of M.S. angle, C.C. blocks shall be paid separately).	meter	773.95	275.00
91	MPPWD BUILDING VOL I 10.22	Welded built up steel sections Steel work welded in built up sections/ framed work including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer using structural steel etc. as required.			
	10.22.1	In stringers, treads, landings etc. of stair cases including use of chequered plate wherever required, all complete.	kg	556.80	101.00
	10.22.2	Frame, ladder, railing In gratings, frames, guard bar, ladder, railings, brackets, gates and similar works.	kg	1543.50	105.00
92	PHE SOR Item no 15.6	Earth work in excavation for foundation, trenches for pipes/ cables, drains or in well excavation etc. by mechanical means/ manual means (exceeding 30cm in depth.) including ramming of bottom, dressing of sides disposal of excavated earth including of all lift and lead upto 50m. Disposed earth to be levelled and neatly dressed.			

S. N	ITEM No	Particulars	Unit	Quantity	Rate
	15.6.5	Hard rock (requiring chiseling where blasting prohibited)	Cum	22.02	722.00
93	MPPWD BUILDING VOL- II 18.7	CPVC pipes for external work :Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot and cold water supply including all CPVC plain and brass threaded fittings. This included jointing of pipes and fittings with one step CPVC solvent cement, trenching, refilling and testing of joints complete as per direction of Engineer-in- Charge. External Work			
	18.7.4	32 mm nominal outer dia.Pipes.	Metre	69.00	238.00
	18.7.6	50 mm nominal outer dia.Pipes.	Metre	248.00	498.00
94	PHE SOR 2.1	Providing, laying, Jointing & field testing of PE pipes made from 100% virgin material (Earlier know as hight Density Polyethylene pipes, PE 100) conforming to IS 4984/ 14151/ 12786/ 13488 with necessary jointing material like mechanical connector or jointing pipes by heating the ends of pipes with the help of Teflon coated electric mirror/ heater to the required temperature and then mechanically pressing the ends together against each other, to form a monolithic & leak proof joint by thermosetting process. It may be required to be done with Jacks/Hydraulic Jacks/ But fusion machine. (50mm & above fusion jointed & below 50mm mechanical jointed)			
	2.1.6	110 mm dia (8 Kg/cm2)	RM	25.00	432.00
95	PHE SOR 15.13	Supplying & filling moorum for pipe bedding or over the pipe (including supply of moorum).			
		As per estimate	Cum	0.38	649.00

S. N	ITEM No	Particulars	Unit	Quantity	Rate
96	MPPWD BUILDING VOL- I 2.24	Filling available excavated earth: Filling available excavated earth (excluding hard rock/Ordinary rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift upto 1.5 m.			
		As per estimate	Cum	19.13	95.00
97	MPPWD BUILDING VOL- II 15.6	Demolishing brick work manually/ by mechanical means including stacking of serviceable material and disposal of unserviceable material within 50 metres lead as per direction of Engineer-in- Charge.			
	15.6.3	In cement mortar.	CUM	0.22	487.00
98	MPPWD BUILDING VOL -I 12.58	Providing and fixing false ceiling at all height including providing and fixing of frame work made of special sections, power pressed from M.S. sheets and galvanized with zinc coating of 120 gms/sqm (both side inclusive) as per IS : 277 and consisting of angle cleats of size 25 mm wide x 1.6 mm thick with flanges of 27 mm and 37mm, at 1200 mm centre to centre, one flange fixed to the ceiling with dash fastener 12.5 mm dia x 50mm long with 6mm dia bolts, other flange of cleat fixed to the angle hangers of 25x10x0.50 mm of required length with nuts & bolts of required size and other end of angle hanger fixed with intermediate G.I. channels 45x15x0.9 mm running at the spacing of 1200 mm centre to centre, to which the ceiling section 0.5mm thick bottom wedge of 80 mm with tapered flanges of 26 mm each having lips of 10.5 mm, at 450 mm centre to centre, shall be fixed in a direction perpendicular to G.I. intermediate channel with connecting clips made out of 2.64 mm dia x 230 mm long G.I. wire at every junction, including fixing			

S. N	ITEM No	Particulars	Unit	Quantity	Rate
		with recommended jointing compound , jointing tapes, finishing with jointing compound in 3 layers covering upto 150 mm on both sides of joint and two coats of primer suitable for board, all as per manufacturer's specification and also including the cost of making openings for light fittings, grills, diffusers, cutouts made with frame of perimeter channels suitably fixed, all complete as per drawings, specification and direction of the Engineer in Charge but excluding the cost of painting with			
	12.58.1	10mm thick plaster of Paris (gypsum anhydrous) sheet 10mm thick pop board.			
	12.58.1.1	Flat surfaces	sqm	32.84	676.00
99	MPPWD BUILDING VOL-I 10.23	Providing and fixing hand rail of approved size by welding etc. to steel ladder railing, balcony railing, staircase railing and similar works, including applying a priming coat of approved steel primer.			
	10.23.1	M.S. tube.	kg	92.30	117.00
100	MPPWD BUILDING VOL -I 10.24	Providing and fixing carbon steel galvanised (minimum coating 5 micron) dash fastener of 10 mm dia double threaded 6.8 grade (yield strength 480 N/mm ²) counter sunk head, comprising of 10 mm dia polyamide PA 6 grade sleeve, including drilling of hole in frame, concrete/ masonry, etc. as per direction of Engineer-in-charge.			
	10.24.3	10x120 mm	each	24.00	78.00

S. N	ITEM No	Particulars	Unit	Quantity	Rate
101	MPPWD BUILDING VOL.-II 28.15	Providing and planting different variety of plants of approved quality and sizes as mentioned including making pits of required size at site, refilled with B.C. Soil mixture manuring and pesticide etc. complete (to be paid separately) including watering and 90 days maintenance from the date of final bill as per direction of engineer in charge complete in all respect (B.C. Mixture paid separately).			
	28.15.1	Shrubs (75-90 cm height) Bahunia Tomentosa, Beloperone Species, Caselpinnia Pulcherima, Bird of Paradise, Callandra Emarginata, Callandra Hybrida, Cassia Bi flora, Cassia Laevigata, Cestrum Nocturnum, Dombeya Mastersii, Euphorbia Caracasana, Euphorbia Pulcherima, Excorea bi color, Excorea tri color, Ficus Blackii, Ficus Reginold, Ficus Panda, Gardenia, Gulphinia, Jasminoides, Hamelia Pattens, Heliconia, Hibiscus Rosasinensis, Hibiscus Verigated, Hibiscus Viceroy, Jatropha Multifida, Largestomia Indica, Malpighia Coccigera, Murraya Exotica, Murraya Koeniggi, Murraya Sambucum, Mussaenda Erythrophylla, Nerium Oleander, Nyctanthus Arbortristis, Plumbago Capensis, Putranjeeva Roxburghii, Tabernaemontana Coronaria, Tabernaemontana Divaricata, Tecoma Gaudi Chaudi, Tecoma Stans, Thevetia Nerifolia, Thuja Compacta and equivalent plants.	Sqm	50.00	80.00

S. N	ITEM No	Particulars	Unit	Quantity	Rate
	28.15.2	Creeper plants (height :30cm to 45) cm) Allamanda Cathartica, Allamanda Grandiflora, Allamanda Violacea, Begnonia Venustha, Boughan Villas (Variety : Butiana, Lady Mary Bearing, Mahaara, Mohan, Scarlet Queen Variagata, Glabra Formosa, Peruviana Odissi, Partha, Shubhra, Thimma, Spectabillis, L.N. Birla, Refulgens), Clerodendrum Splendens, Clerodendrum Thompsonae, Ipomea Purpurea, Jasminum Grandiflorum, Jasminum Humile (Yellow), Passiflora Caerulea (Rakhi Bel), Petrea Volubilis, Quis Qualis Indica, Tecoma Grandiflora, Veronia Elaeagnifolia (Curtain Creeper), Mandvella, Garlic Creeper, Callimitis	Each	25.00	50.00
102	28.15.3	Ground cover plants height: 30cm-45cm Alpinia Verigated, Alternanthera species, Aspyragus Myerri, Aspyragus Springenii, Aspidistra, Canna (regular, Dwarf), Chlorodendron Inermii, Chlorophytum (Green), Chlorophytum verigated, Coffea Chinensis, Dianella Verigated, Durranta (Goldiana, Green, Verigated), Euphorbia Milli hybrid, Ipomea (Golden leaves), Iresine herbstii, Juniper Prostata, Juniper Africana, Ophiopogon plant, Ophiopogon jaburan, Portulacaria Afra (jade Plant), Schefflera Green, Schefflera verigated, Setcreasea Purpurea, Syngonium (Butterfly) species, Syngonium miniature, Syngonium Dwarf, Syngonium variegated, Tradescantia, Wadelia Trilobata, Zebrina Tradescantia, Pendanas, Spider Lily Black, Spider Lily verigated, Aclypha (Red, Green,Mini), Lantana (Red, Yellow, Purple, White, verigated), Haemalia Mini and similar plants.	Each	50.00	50.00
	28.15.8	Standard Roses H.T. Variety	Each	25.00	382.00

S. N	ITEM No	Particulars	Unit	Quantity	Rate
103	MPPWD BUILDING VOL-II 28.14	Digging holes in ordinary soil and refilling the same with the excavated earth mixed with manure or sludge in the ratio of 2:1 by volume (2 parts of stacked volume of earth after reduction by 20% : 1 part of stacked volume of manure after reduction by 8%) flooding with water, dressing including removal of rubbish and surplus earth, if any with all leads and lifts (cost of manure, sludge or extra good earth if needed to be paid for separately) :			
	28.14.1	Holes 120 cm dia and 120 cm deep.	each	150.00	141.00
104	MPPWD BUILDING VOL-I 9.68	Providing and fixing ISI marked stainless steel door latches with screws etc. complete :			
	9.68.1	300x20x6 mm	each	8.00	211.00
105	MPPWD BUILDING VOL-II 15.11	Dismantling tile/ Kota stone/ Marble / Granite work in floors/walls and roofs laid in cement mortar including stacking material within 50 metres lead.			
	15.11.1	For thickness of tiles 10 mm to 25 mm.	sqm	7.42	17.00
106	MPPWD BUILDING VOL-I 11.50	Providing and fixing Ceramic glazed wall tiles 300x450 mm or more (having thickness 6 to 7 mm) of 1st quality conforming to IS: 15622 of approved make in all Colours& shades, except burgundy, bottle green, black laid on 12mm thick bed of Cement Mortar 1:3 (1 Cement: 3 sand)prepad same day when mortar is still green jointed with grey cement slurry @3.3 kg per sqm including pointing the joints with white cement and matching pigments etc., complete.	Sqm	7.42	776.00

S. N	ITEM No	Particulars	Unit	Quantity	Rate
107	MPPWD BUILDING VOL-I 11.64	Providing and fixing stone slab table rubbed on both faces edges rounded and polished of size as required and 1.8 cm thick fixed in urinal partitions by cutting a chase of appropriate width with chase cutter and embedding the stone in the chase with epoxy grout or with cement concrete 1:2:4 (1 cement: 2 sand: 4 graded stone aggregate 6 mm nominal size) as per direction of Engineer-in charge and finished smooth			
	11.64.2	Granite Stone of approved shade	Sqm	5.76	3422.00
108	MPPWD BUILDING VOL-II 14.75	Cleaning of gully trap chamber Cleaning and desilting of gully trap chamber, including removal of rubbish mixed with earth etc. and disposal of same, all as per the direction of Engineer- in-charge.	each	2.00	48.00
109	MP-PWD BUILDING VOL.-II 17.14	Providing and fixing Stainless Steel A ISI 304 (18/8) kitchen sink as per IS 13983 with C.I. brackets and stainless steel plug 40 mm including painting of fittings and brackets, cutting and making good the walls wherever required :			
	17.14.2	Kitchen sink without drain board			
	17.14.2.1	610x510 mm bowl depth 200 mm.	each	1.00	4583.00
110	MP-PWD BUILDING VOL.-II 17.29	Providing and fixing white vitreous china wash basin including making all connections but excluding the cost of fittings :			
	17.29.1	Flat back wash basin of size 630x450mm.	Each	11.00	1379.00
111	MP-PWD BUILDING VOL.-II 17.65	Providing and fixing 100 mm sand cast Iron grating for gully trap.	Each	12.00	43.00
112	MP-PWD BUILDING VOL.-II 18.65	Providing and fixing C.P. brass two way angle cock with wall flange of approved quality conforming to IS standards, 15 mm nominal bore	Each	3.00	1188.00

S. N	ITEM No	Particulars	Unit	Quantity	Rate
113	MP-PWD BUILDING VOL.-II 18.29	Providing and fixing brass bib cock of approved quality			
	18.29.1	15 mm nominal bore	Each	10.00	306.00
114	MP-PWD BUILDING VOL.-II 17.6	Providing and fixing white vitreous china flat back or wall corner type lipped front urinal basin of 430x260x350mm and 340x410x265 mm sizes respectively with automatic flushing cistern with standard flush pipe and C.P. brass spreaders with brass unions and G.I clamps complete, including painting of fittings and brackets, cutting and making good the walls and floors wherever required :			
	17.6.1	One urinal basin with 5 litre white P.V.C. automatic flushing cistern	Each	10.00	2754.00
115	MP-PWD BUILDING VOL.-II 17.2	Providing and fixing white vitreous china pedestal type water closet (European type W.C. pan) with seat and lid, 10 litre low level white P.V.C. flushing cistern, including flush pipe, with manually controlled device (handle lever), conforming to IS : 7231, with all fittings and fixtures complete including cutting and making good the walls and floors wherever required :			
	17.2.1	W.C. pan with ISI marked white solid plastic seat and lid	Each	7.00	3036.00
116	MP-PWD BUILDING VOL.-II 17.1	Providing and fixing water closet squatting pan (Indian type W.C. pan) with 100mm sand cast Iron P or S trap, UPVC P or S trap, 10 litre low level white P.V.C. flushing cistern, including flush pipe, with manually controlled device (handle lever) conforming to IS : 7231, with all fittings and fixtures complete including cutting and making good the walls and floors wherever required :			

S. N	ITEM No	Particulars	Unit	Quantity	Rate
	17.1.1.	White Vitreous china Orissa pattern W.C. pan of size 580x440mm with integral type foot rests.	Each	3.00	2995.00
117	MP-PWD BUILDING VOL.-II 18.37	Providing and fixing C.P. brass pillar cock approved quality and make conforming to IS: specification. and weighing not less than 650gm, 15 mm nominal bore 125 mm long foam flow.	Each	4.00	1188.00
118	MP-PWD BUILDING VOL.-II 18.6	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot and cold water supply including all CPVC plain and brass threaded fittings.			
		i/c fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes and fittings with one step CPVC solvent cement and testing of joints complete as per direction of Engineer-in-Charge.			
	18.6.1.3	25 mm nominal outer dia .Pipes.	meter	15.00	177.00
119	MP-PWD BUILDING VOL.-II 18.52	Providing and fixing Unplasticised P.V.C. connection pipe with PTMT Nuts collar and bush of approved quality and colour 15 mm nominal bore			
	18.52.1	30cm length.	each	12.00	61.00
	“				
120	MP-PWD BUILDING VOL.-II 18.28	Providing and placing on terrace (at all floor levels) polyethylene water storage tank ISI : 12701 marked with cover and suitable locking arrangement and making necessary holes for inlet, outlet and overflow pipes but without fittings and the base support for tank	Per Liter	2000.00	7.00
121	MP-PWD BUILDING VOL.-II 17.86	Providing and fixing PTMT urinal cock of approved quality and colour. 15 mm nominal bore, 80mm long. 42 mm high and 30mm wide with BSP female threads weighing not less than 48 gms.	each	8.00	144.00

S. N	ITEM No	Particulars	Unit	Quantity	Rate
122	MP-PWD BUILDING VOL.-II 17.64	Providing and fixing P.V.C. waste pipe for sink or wash basin including P.V.C. waste fittings complete			
	17.64.1	Semi rigid pipe			
	17.64.1.1	32 mm dia	each	4.00	87.00
123	MP-PWD BUILDING VOL.-II 15.13	Taking out paver blocks : 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	sqm	2388.49	31.00
124	MP-PWD BUILDING VOL.-II 14.60	Laying old cement concrete interlocking paver blocks of any design/shape laid in required line,level, curvature, colour and pattern over and including 50mm thick compacted bed of sand, filling the joints with sand etc. all complete as per the direction of Engineer-in-charge. (Old CCpaver blocks shall be supplied by the department free of cost).	sqm	1671.94	142.00

S. N	ITEM No	Particulars	Unit	Quantity	Rate
125	MPPWD Road & Bridge 6.14	Providing and laying factory made coloured chamfered edge Cement Concrete paver blocks of required strength, thickness and size/shape, made by table vibratory method using PU mould, laid in required colour and pattern over 50mm thick compacted bed of stone dust, compacting and proper embedding/laying of inter locking paver blocks into the bedding layer through vibratory compaction by using plate vibrator, filling the joints with sand and cutting of paver blocks as per required size and pattern, finishing and sweeping extra sand including locking edges with M 15 cement concrete in footpath, light traffic parking etc. complete as per direction of Engineer-in-Charge.			
	ii	80mm thick C.C. paver block of M-35 grade with approved colour, design and pattern.	sqm	716.55	748.00
126	MPPWD Road & Bridge 8.1	Cast in Situ Cement Concrete M20 kerb			
		Construction of cement concrete kerb with top and bottom width 115 and 165 mm respectively, 250 mm high in M 20 grade PCC on M-15grade 150 mm thick, or with kerb laying machine, foundation having 50 mm projection beyond kerb stone, kerb stone laid with kerb laying machine, foundation concrete laid manually, all complete as per clause 409			
	A	Using Concrete Mixer	Metre	151.60	360.00
			Total Amount in Rs.		
			Say in Cr		