

Development of Mini Sports Complex at Shakti nagar, Jabalpur (M.P.)**SUMMARY SHEET**

Sr No.	Item Description	AMOUNT
1	JOGGERS TRACK	2256656.67
2	BASKET BALL COURT	1852421.31
3	VOLLEY BALL COURT	1039291.10
4	SWIMMING POOL	6736878.85
5	BOUNDARY WALL	4686476.24
6	LANDSCAPE	1106590.50
7	GYMNASIUM BUILDING	16509554.30
	TOTAL CIVIL WORKS	34187868.97
10	ELECTRICITY & OTHER ALLIED WORKS @ 10%	3418786.90
	Grand Total	42119454.57

ESTIMATE OF JOGGERS TRACK

SN		DESCRIPTIONS	QTY	UNIT	RATE	Reduced Rate as per Order	AMOUNT
1		2	3	4	5	6	7
1		Surface dressing of the ground including removing vegetation and in-equalities not exceeding 15cm deep and disposal of rubbish, lead upto 50 m and lift upto 1.5 m. All kinds of soil.	1117.50	100 Sqm	663.00	596.70	6668.12
2		Construction of Granular Sub-base by providing coarse graded material, spreading in uniform layers with on prepared surface, mixing by in placed method at OMC, and compacting with vibratory roller to achive the desired density, complete in all respect and as per relevant clauses of section-400. For grade III Material	335.25	Cum	530.00	477.00	159914.25
		Construction of dry lean cement concrete Sub-base over a prepared sub-grade with coarse and fine aggregate conforming to IS: 383, the size of coarse aggregate not exceeding 25mm, aggregate cement ratio not to exceed 15:1, aggregate gradation after blending to be as per table of MORTH Specifications 600-1, cement content not to be less than 200 kg/cum, optimum moisture content to be determined during trial length construction, concrete strength not to be less than 10 Mpa at 7 days, mixed in a batching plant, transported to site, laid with paver with electronic sensor/mechanical paver, compacting with 8-10 tonnes vibratory roller, finishing and curing and as per relevant clauses of section-603.	47.00	Cum	2715.00	2443.50	114844.50
	Vol III 5.15	Providing and laying 25 mm thick mastic asphalt wearing course with paving grade bitumen meeting the requirements given in table 500-29, prepared by using mastic cooker and laid to required level and slope after cleaning the surface, including providing antiskid surface with bitumen precoated fine-grained hard stone chipping of 13.2 mm nominal size at the rate of 0.005cum per 10 sqm and at an approximate spacing of 10 cm center to center in both directions, pressed into surface when the temperature of surfaces not less than 1000C, protruding 1 mm to 4 mm over mastic surface complete in all respect and as per relevant clauses of section-515.	476.00	SqM	503.00	452.70	215485.20
3	11.49	Providing and laying at or near ground level factory made kerb stone of M- 25 grade cement in position to the required line, level and curvature jointed with cement mortar 1:3 (1 cement: 3 coarse sand) including making joints with or without grooves (thickness of joints except at sharp curve shall not to more than 5mm) including making drainage opening wherever required complete etc. as per direction of Engineer-in-charge (length of finished kerb edging shall be measured for payment). (Precast C.C. kerb stone shall be approved by Engineer-in-charge).	40.00	CuM	5098.00	4588.20	183528.00
	NON SOR	Providing and fining ready made matt of sythetic rubberised material 7 to 8 mm thick for Jogging area	476.00	SqM	2540.00	2540.00	1209040.00
4		Providing and fixing peddler light@3.00 c/c (NON SOR Item)	106.25	No.	350.00	315.00	33468.75
5		Providing and fixing G.I. chain link fabric fencing of required width in mesh size25x25mm made of G.I.wire of dia.3mm including strengthening with 3mm dia.wire or nuts,bolts and washers as required complete as per the direction of Engineer-in-charge.	670.50	Sqm	553.00	497.70	333707.85

		Total					22,56,656.67
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BASKET BALL COURT							
SN		DESCRIPTIONS	QTY	UNIT	RATE	Reduced Rate as per Order	AMOUNT
1		2	3	4	5	6	7
1	4.1	Construction of Granular Sub-base by providing coarse graded material, spreading in uniform layers with on prepared surface, mixing by in placed method at OMC, and compacting with vibratory roller to achive the desired density, complete in all respect and as per relevant clauses of section-400. For grade III Material	272.30	Cum	614.00	552.60	150470.22
2	Vol III 6.1	Construction of dry lean cement concrete Sub-base over a prepared sub-grade with coarse and fine aggregate conforming to IS: 383, the size of coarse aggregate not exceeding 25mm, aggregate cement ratio not to exceed 15:1, aggregate gradation after blending to be as per table of MORTH Specifications 600-1, cement content not to be less than 200 kg/cum, optimum moisture content to be determined during trial length construction, concrete strength not to be less than 10 Mpa at 7 days, mixed in a batching plant, transported to site, laid with paver with electronic sensor/mechanical paver, compacting with 8-10 tonnes vibratory roller, finishing and curing and as per relevant clauses of section-603.	90.72	Cum	2715.00	2443.50	221674.32
3	Vol III 5.15	Providing and laying 25 mm thick mastic asphalt wearing course with paving grade bitumen meeting the requirements given in table 500-29, prepared by using mastic cooker and laid to required level and slope after cleaning the surface, including providing antiskid surface with bitumen precoated fine-grained hard stone chipping of 13.2 mm nominal size at the rate of 0.005cum per 10 sqm and at an approximate spacing of 10 cm center to center in both directions, pressed into surface when the temperature of surfaces not less than 1000C, protruding 1 mm to 4 mm over mastic surface complete in all respect and as per relevant clauses of section-515	136.08	Cum	4044.00	3639.60	495276.77
4	Non Sor	Supply and installation of Bergo Multi-sports Interlocking modular PP tiles or equivalent having material composition of environmentally friendly recyclable UVstabilized 100% polypropylene with ISO2076 standards. Each tile should have thickness of 14.1mm (EN 428 standards), size of 303.3mm*303.3mm (EN427 standards), weight of 0.356kg (EN 430 standards), slip resistance of 108 PTV (EN13036-4), Impact resistance of 20kJ/sqm, shock absorption of 6% (EN14808), vertical deformation of 0.3mm (EN14809), vertical ball behavior of 98% (EN12235), resistance to wear of 0.1g/1000cycles (EN ISO-54701). The flooring work should have material defects warranty of 10 years.	500.00	m.sq	1670.00	1670.00	835000.00
5	Non SOR	Providing and fixing net postFixed Basketball Court- Providing fixed basketball outdoor posts with 3.2 mtr. umbrella projection with 200 mm square mild steel pipe powder coated of approved make with front side safety padding of 5.5" thick foam blue colour and 23 mm transparent outdoor acrylic board 180x105x 25 mm of approved make with international standard double die frame aluminium anodized/steel powder coated with built in Pair 196950.00 brackets for mounting including dunking rim solid 20mm thick with three spring mechanism box packing of approved make with nets of regulation size 45 cm, cup shape of heavy duty nylon silky mix white coloured cord. (The cost of earthwork, concrete, labour for installation of the posts to be included in the rate). Including Marking the required lines as per specifications of Sports Authority of India	2.00	No	75000.00	75000.00	150000.00
Total							18,52,421.31

CONSTRUCTION OF VOLLEY BALL COURT including buffer zone 34 x 19 M							
SN		DESCRIPTIONS	QTY	UNIT	RATE	Reduced Rate as per Order	AMOUNT
1		2	3	4	5	6	7
1	Vol III 4.1	Construction of Granular Sub-base by providing coarse graded material, spreading in uniform layers with on prepared surface, mixing by in placed method at OMC, and compacting with vibratory rollar to achive the desired density, complete in all respect and as per relevant clauses of section-400. For grade III Material	323.00	Cum	614.00	552.60	178489.80
2	6.1	Construction of dry lean cement concrete Sub-base over a prepared sub-grade with coarse and fine aggregate conforming to IS: 383, the size of coarse aggregate not exceeding 25mm, aggregate cement ratio not to exceed 15:1, aggregate gradation after blending to be as per table of MORTH Specifications 600-1, cement content not to be less than 200 kg/cum, optimum moisture content to be determined during trial length construction, concrete strength not to be less than 10 Mpa at 7 days, mixed in a batching plant, transported to site, laid with paver with electronic sensor/mechanical paver, compacting with 8-10 tonnes vibratory roller, finishing and curing and as per relevant clauses of section-603.	64.60	Cum	2715.00	2443.50	157850.10
3	5.15	Providing and laying 25 mm thick mastic asphalt wearing course with paving grade bitumen meeting the requirements given in table 500-29, prepared by using mastic cooker and laid to required level and slope after cleaning the surface, including providing antiskid surface with bitumen precoated fine-grained hard stone chipping of 13.2 mm nominal size at the rate of 0.005cum per 10 sqm and at an approximate spacing of 10 cm center to center in both directions, pressed into surface when the temperature of surfaces not less than 1000C, protruding 1 mm to 4 mm over mastic surface complete in all respect and as per relevant clauses of section-515	646.00	SqM	503.00	452.70	292444.20
4	NoN SOR	Supply and installation of Bergo Multi-sports Interlocking modular PP tiles or equivalent having material composition of environmentally friendly recyclable UVstabilized 100% polypropylene with ISO2076 standards. Each tile should have thickness of 14.1mm (EN 428 standards), size of 303.3mm*303.3mm (EN427 standards), weight of 0.356kg (EN 430 standards), slip resistance of 108 PTV (EN13036-4), Impact resistance of 20kJ/sqm, shock absorption of 6% (EN14808), vertical deformation of 0.3mm (EN14809), vertical ball behavior of 98% (EN12235), resistance to wear of 0.1g/1000cycles (EN ISO-54701). The flooring work should have material defects warranty of 10 years.	150.00	SqM	1670.00	1670.00	250500.00
5	NoN SOR	Supply & Installation of Volleyball Poles with Net including the Marking the required lines as per specifications of Sports Authority of India	1.00	No	160000.00	160000.00	160000.00
		Total					10,39,291.10

CONSTRUCTION OF SWIMMING POOL

SN	DESCRIPTIONS	NO				QTY	UNIT	RATE	Reduced Rate as per Order	AMOUNT
1	2	3				3	4	5	6	7
1	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 disposal of excavated earth, lead upto 50m and lift upto 1.5m, disposed earth to be levelled and neatly dressed. All kinds of soil.	1	25.00	15.00	2.60	975.00	CuM	109.00	98.10	95647.50
2	Disposal of Excavated Earth Loading and unloading of stone boulder / stone aggregates / sand / kanker / moorum. (Placing tipper at loading point, loading with front end loader, dumping, turning for return trip, excluding time for haulage and return trip)	1	25.00	15.00	2.40	900.00	cum	102.00	91.80	82620.00
2	Construction of Granular Sub-base by providing coarse graded material, spreading in uniform layers with on prepared surface, mixing by in placed method at OMC, and compacting with vibratory rollar to achive the desired density, complete in all respect and as per relevant clauses of section-400. For grade III Material	1	25.00	15.00	0.30	112.50	Cum	530.00	477.00	53662.50
4	Providing and laying Cement Concrete grade M-15 Nominal mix with 20mm graded crushed stone aggregate, laid with a fixed form or alip form paver with spreading the concrete by shovels mixing shall be in mechanical mixer, compacting by use of pin plate and screed vibrators including form work by strong steel. PCC M-10	1	25.00	15.00	0.25	93.75	Cum	4154.00	3738.60	350493.75
5	Reinforced cement concrete work in walls (any thickness), including attached pilasters, buttresses, plint hand string courses, fillets, columns, pillars, piers, abutments, posts and struts etc.upto floor two level excluding cost of centering, shuttering, finishing and reinforcement. Cement concrete grade M-20 (Nominal Mix) with 20 mm maximum size of stone aggregate.	1	80.00	0.25	1.90	38.00	Cum	5050.00	4545.00	172710.00
6	Providing and laying in position specified grade of reinforced cement concrete excluding the cost of centering, shuttering, finishing and reinforcement - All work up to plinth level :Cement concrete grade M-20 (Nominal Mix) with 20 mm maximum size of stone aggregate.	1	25.00	15.00	0.20	75.00	Cum	4728.00	4255.20	319140.00
7	Centering and shuttering including strutting, propping etc.and removal of form for :									
	Foundations, footings, bases of columns, etc. For mass concrete.	1	80.00		0.20	16.00	sqm	138.00	124.20	1987.20
						344.00	sqm	216.00	194.40	66873.60
8	ReinforcementforR.C.C.workincludingstraightening,cutting,bending,placinginpositionandbindingincludingcostofbindingwireupto floor two level including all wastage etc. complete. Hot rolled deformed bars.					17741.00	KG	60.00	54.00	958014.00
9	Brick work will well burnt open bhatta bricks crushing strength not less than 25kg/cm ² and water absoption not more than 20% in above plinth level upto floor two level In cm 1:4.	1	80.00	2.00	0.25	40.00	cum	3310.00	2979.00	119160.00
10	Providing and laying Ceramic glazed floor tiles 300x300 mm (9 to 10 mm thick) of 1st quality conforming to IS : 15622 of approved make in colours such as White, Ivory, Grey, Fume Red Brown, laid on 20 mm thick Cement Mortar 1:4 (1 Cement : 4 Coarse sand) including pointing the joints with white cement and matching pigment etc., complete	1	24.50	14.50		355.25	sqm	804.00	723.60	257058.90
11	Providing and fixing 1st quality ceramic glazed wall tiles conforming to IS : 15622 (6 to 7mm thick) of approved make in all colours, shades except burgundy, bottle green, black of any size as approved by Engineer-in- Charge in skirting, risers of steps and dados over 12 mm thick bed of cement Mortar 1:3 (1 cement : 3 coarse sand) and jointing with grey cement slurry @ 3.3kg per sqm including pointing in white cement mixed with pigment of matching shade complete.					156.00	sqm	686.00	617.40	96314.40
12	Providing and fixing 10mm thick acid and or alkali resistant tiles of approved make and colour using acid and or alkali resisting mortar bedding and joints filled with acid and or alkali resisting cement as per IS : 4457 complete as per the direction of Engineer-in- Charge.	1	100.00	3.00		300.00	sqm	1078.00	970.20	291060.00

PLUMBING AND SANITARY WORKS OF SWIMMING POOL

No	Description	Qty	Unit	Unit Rate	Total
				In Rs.	In Rs.
	WATER TREATMENT				
1	FILTRATION PLANT				
	Totally anticorrosive bobbin wound sand filter 2000 mm dia manufactured with fibre glass and polyester resin, fitted with collector arms and diffuser made from unplasticised PVC and Polypropelene. Filter media height -1000mm and capable of accomodating flow rate of 93.6 M ³ /hr @ 30m ³ /hr/m ² Complete with lid in polyester resin and fibre glass for media charging, 2 No. pressure Gauges & associated tubing, manual air release valve, purge cap for sand discharge and 140 PVC flanged connection for inlet and outlet.	1.00	nos.	685000.00	685000.00
2	5 WAY VALVE BATTERY				
	160 mm Valve battery built in high pressure PVC piping PN 10 with flange connections to filters according to DIN standards. Provided with 5 No. 160 mm Butterfly valves also in CI Body, SGI disc & Nitrile seat. Supports made of powder coated Msteel with clamps and fixing screws	1.00	nos.	115000.00	115000.00
3	FILTER MEDIA				
	Quartz Filter Media mesh size 16 /32	10000.00	kg	12.00	120000.00
	Quartz Filter Media mesh size 8 / 16	5000.00	kg	12.00	60000.00
4	RECIRCULATING PUMPS				
	Horizontal monobloc recirculation pumps with body, pot type prefilter, and support in Cast iron, impeller in Bronze, shaft in SS , mechanical seal and prefilter basket in AISI-316 stainless steel. and with motor -3000rpm/1500 rpm , 3 PH , 400/400V, 10 HP, 50HZ, protection IP-54 .				
	Flow: 115 M ³ /hr @ 10.0m head (3 No. W + 1 No. SB)	2.00	nos.	125000.00	250000.00
5	ELECTRICAL CONTROL PANEL FOR PUMPS				
	mounted to the foundation. The control panel should be suitable for 440 volts, 50 Hz, 4 wire supply. Quoted price shall include with 25mm thick rubber mats, wiring, cabling, control wiring and copper grounding from control panel to various equipment like recirculation pump, dosing equipment, agitator etc. The panel shall have compartment for bus bar and cable alleys. The panel should be in accordance with the specifications. Providing and fixing necessary cables, internal wiring for all equipments and power cabling for motors, dosing systems, controller etc. Control panel should consists of Ameter, Volt meter, Selector Switch, Single phase preventor etc. Cost should be included in the cost of M.C.C. etc. complete.	1.00	nos.	85000.00	85000.00
6	AUTOMATIC pH / REDOX CONTROLLER				

16	UPVC Ball Valves-32 mm	5.00	Nos	2450.00	12250.00
17	UPVC Ball Valves-63 mm	4.00	Nos	4500.00	18000.00
18	CI Flap type Non Return Valves -160mm	5.00	Nos	18500.00	92500.00
19	CI Butterfly Valves with SS wettable parts Dia -160mm	15.00	Nos	16150.00	242250.00
20	Valve Assembly Kit for Dia -160mm Butterfly Valve / NRV in Powder Coated MS Slipon Flanges, GI Nut Bolts with washers, Rubber Gasket etc. complete	15.00	Nos	6500.00	97500.00
21	CI Foot Valves Dia -110	4.00	Nos	6500.00	26000.00
22	CI Sluice Valves Dia -160 mm with GI Operating Key assembly	2.00	Nos	37500.00	75000.00
<u>INTERCONNECTING PIPING</u>					
23	Connecting Header Connection Header in SS provided with 1 No. 25 mm threaded nipple for doser connection & Required no. of connection 160 mm end Nozzles & MS powder coated 160 mm slipon flange to be connected with filtration plumbing	2.00	Nos	47500.00	95000.00
Filtration System Plumbing Supply and installation of all interconnecting pipes conforming IS 4985:2000 and fittings and valves in PVC PN 10 / PN 6 / PN 2.5 The various pipe sizes shall be designed to achieve the following velocities of flow a) Return Line : 1.8 - 2.1m/sec. b) Suction Line : 1.2-1.5m/sec. c) Overflow Line : 0.6-0.8m/sec. Quote for the supply and installation for the following pipe sizes :(In meters) Estimate to include the elbows, tees , flanges, GI nut bolts, rubber gaskets and other fittings, appropriate supports should be provided to plumbing for all heights & depths					
24	63 mm dia. (PN 10)	100.00	m	455.00	45500.00
25	160 mm dia. (PN 10)	120.00	m	1350.00	162000.00
26	160 mm dia. (PN 6)	120.00	m	950.00	114000.00
27	315 mm dia. (PN 2.5)	25.00	m	3850.00	96250.00
ACCESSORIES					
<u>UNDERWATER ILLUMINATION FOR MAIN POOL</u>					
28	300 W / 12 V Underwater Lights "STANDARD" model Underwater Lights. Niche in polypropylene and glass fibre. 300W 12V Lamp. With 3 mt. cable and in ABS. rim.	20.00	nos	11500.00	230000.00
29	Junction Boxes Junction Boxes, made in ABS, composed of 3 entries 3/4" or PG-16 coupling	20.00	nos.	2250.00	45000.00
30	Flexible Cable Conduits Cable Conduit Hose, Flexible 1 mt. long conduit for conn.light to junction box. 3/4" and PG-16 threaded ends.	20.00	nos	475.00	9500.00
31	Step Down Transformers 300 VA , 240 V / 12 V Step down transformer ,isolation type with IP -56 protection	20.00	nos.	6750.00	135000.00

32	Transformers Panel -				
	Cubical powder coated Transformer Panel in CRCA sheet with incoming 2 pole MCB capable for mounting 10 no. transformers, complete in all respect	4.00	nos.	23000.00	92000.00
33	OVER FLOW GRATINGS				
	Over Flow Grating in UV stabilized Polypropylene. Ht.22mm, width: 295mm	40.00	m	1200.00	48000.00
34	SS LEADER				
	SS 316 SS Leader in 43 mm / 14 G Pipe with Flat Step Trades				
	4 Step Ladder	1.00	No.	21500.00	21500.00
	5 Step Ladder	1.00	No.	24500.00	24500.00
	6 Step Ladder	1.00	No.	26500.00	26500.00
35	VACCUM HEAD				
	SS 304 Metalic vacuum head , 900 mm long , PP wheel mounted, spring mounted brush at bottom of head, toeabe with nylon rope , 2" connection for hose	1.00	No.	31500.00	31500.00
36	Vacuum Pump with Trolley				
	Trolley mounted 2 HP Kirloskar make Self priming pump with LNT 2 HP DOL Starter, 100 M 1.5 Sq. mm 2 core PVC insulated Cu Flexible cable	1.00	No.	32500.00	32500.00
37	SUCTION HOSE				
	Extra Flexible plastic vacuum hose 2" dia, 30mtrs long .	1.00	No.	3950.00	3950.00
38	DEEP NET				
	Deep bag net made in polypropylene and white polyester netting with wishbone connection	1.00	No.	1650.00	1650.00
39	SHALLOW NET				
	Surface net made in polypropylene and white polyester netting with wishbone connection	1.00	No.	1250.00	1250.00
40	Curved brush made in polypropylene for pool basins and scum liners with wishbone connection.	1.00	No.	1650.00	1650.00
41	TELESCOPIC HANDLE				
	Anodized aluminium, which can be adopted to the straight brush with wishbone connection and 9 m. Long	1.00	No.	11750.00	11750.00
42	Test kit for residual chlorine & pH	1.00	No.	475.00	475.00
43	Cabling for the Underwater Lights considering the voltage drop from the transformer to the light source				
	Cables shall be flexible, 2 core, copper conductor. Enclosed in conduits				
	Voltage at the light source shall be between 11.8V-12 V				
	a) Cable Size : Cu cable 6 sq.mm / 2 core Flexible	1000.00	m	171.00	171000.00
					-
	PVC Conduit pipe sizes :(In meters)				-
	Estimate to include the elbows, tees , flanges, CLAMPS and other fittings, appropriate supports should be provided to plumbing for all heights & depths				-
	32 mm dia. (PN 6)	1000.00	m	85.00	85000.00
	INSTALLATION & COMMISSIONING				
44	Installation and commissioning of the above items in place	1.00	LS	250000.00	250000.00
	TOTAL				38,42,137.00

ESTIMATE OF BOUNDARY WALL

S. No	SOR Item No.	Item of Work	Measurement	Quantity	Unit	10% Reduced Rate as per UADD Orders	Reduced Amount in Rs.
			No.				
	Excavation						
	2.8.1, Vol. 2, Pg 16	Earth work in excavation by mechanical means (Hydraulic avator) / manual means in foundation enches or drains (not exceeding 1.5 m in width or 10 sqm on plan) including dressing of sides and ramming of bottoms, lift upto 1.5 m, including getting out the excavated soil and disposal of surplus xcavated soil as directed, within a lead of 50 m2.8.1 All kinds of soil					
		For pile cap, (.65 x .65 x .35 m)	152.00	82.37			
				82.37	CuM	116.10	9562.58
	Concrete						
	4.1.2, Vol. 2, Pg 34	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering All work up to plinth level					
		4.1.2 Cement concrete grade M-15 with 20 mm max.size of stone agg.					
		For pile cap Base	152.00	10.98			
		Total		10.98	CuM	3738.60	41057.31
	16.9, Vol. 2, Pg 187	Boring, providing and installing bored cast-in-situ reinforced cement concrete pile of specified diameter and length below the pile cap M 20 in cement concrete, to carry a safe working load not less than specified, excluding the cost of steel reinforcement but including the cost of boring with, bentonite solution and temporary casing of appropriate length for setting out and removal of same and the length of the pile to be embedded in the pile cap etc. all complete, including removal of excavated earth with all lifts and leads (Length of pile for payment shall be measured upto bottom of pile cap).					
		(16.9.1) 300 mm dia piles	152.00	760.00			
		Total		760.00	Rm	1048.50	796860.00
	5.1, Vol. 2, Pg 46	Providing and laying in position specified grade of reinforced cement concrete excluding the cost of centering, shuttering, finishing and reinforcement - All work up to plinth level : 5.1.1 Cement concrete grade M-20 (Nominal Mix) with 20 mm maximum size of stone aggregate.					
		Pile Cap	152.00	22.48			
		Column	152.00	3.99			
		Total		26.47	Cum	4255.20	112622.38
	5.2.1, Vol. 2, Pg 46	Reinforced cement concrete work in walls (any thickness), including attached pilasters, buttresses, plinth and string courses, fillets, columns, pillars, piers, abutments, posts and struts etc. up to floor two level excluding cost of centering, shuttering, finishing and reinfor cement 5.2.1 Cement concrete grade M-20 (Nominal Mix) with 20 mm maximum size of stone aggregate					
		Plinth beam					
		Boundry wall Periphery beam	152.00	31.46			
		Column above plinth	152.00	33.52			
		Total		64.98	Cum	4545.00	295334.10
	Reinforcement						
	5.20.6, Vol. 2, Pg 49	Reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding including cost of binding wire upto floor two level including all wastage etc. complete.					
		5.20.6 Thermo-Mechanically Treated bars.					
		Reinforcement for R.C.C. work @75kg/cum of column concrete	53.69	4027.05			
		Reinforcement for R.C.C. work @160kg/cum of foundation concrete	22.48	3596.32			
		Reinforcement for R.C.C. work @120kg/cum of column concrete	3.99	478.80			

		Reinforcement for R.C.C. work @120kg/cum of column concrete	33.52	4021.92			
		Reinforcement for R.C.C. work @100kg/cum of beam concrete	31.46	3146.40			
		Total		15270.49	Kg	54.00	824606.46
Back Filling & Water Proofing							
	2.25, Vol. 2, Pg 19	Filling by available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift upto 1.5 m.					
		For foundation (volume of earth from excavation item)	1.00	82.37			
		Deduction for foundation concrete (volume from concrete item above)	-1.00	-37.45			
		Total		44.92	CuM	53.10	2385.04
	4.10. Vol. 2, Pg 36	Providing and laying damp-proof course 50mm thick with cement concrete grade M-15 (Nominal Mix) with 20 mm maximum size of stone aggregate					
		Boundry wall Periphery beam	152.00	96.84			
		Total		96.84	Sqm	203.40	19697.09
	4.11. Vol. 2, Pg 36	Extra for providing and mixing water proofing material in cement concrete work @ 1 kg per 50kg of cement. in concrete upto plinth Measurement as above)		786.47			
		in concrete upto plinth measurement as above) Peripheri Beam		31.46			
		DPC (5% of Beam)		4.84			
		Volume of Concrete		822.77			
		Nos of Bag@410 kg or 8.2bags per cum		6746.74	Per 50 kg cement	54.90	370395.93
Centering & Shuttering							
	20.1.1, Vol. 2, Pg 209	Centering & shuttering propping and removal of form for					
		20.1.1 Foundations, footings, bases of columns, etc. For mass concrete.					
		PILE CAP	152.00	136.19			
		Total		136.19	Sqm	124.20	16915.05
	20.1.6, Vol. 2, Pg 209	Centering & shuttering propping and removal of form for Columns, Pillars, Piers, Abutments, Posts, Struts.					
		Column	152.00	49.40			
		Column above plinth	152.00	414.96			
		Total		414.96	Sqm	253.80	105316.85
	20.1.5, Vol. 2, Pg 209	Centering & shuttering propping and removal of form for					
		20.1.5 Lintels, beams, plinth beams, girders, bressumers and cantilevers.					
		Beam					
		Boundry wall Periphery beam	152.00	378.48			
		Total		378.48	Sqm	182.70	69148.30
Brick Work							
	6.38, Vol. 2, Pg 62	Brick work with well burnt open bhatta bricks crushing strength not less than 25kg/cm ² and water absoption not more than 20% in foundation and plinth In cement mortar 1:4.					
		Boundry wall (each unit length for brick = 2.77m side)	152.00	54.23			
		Total		54.23	CuM	2822.40	153058.62
Cement Plaster							
	13.11, Vol. 2, Pg 157	18 mm cement plaster in two coats under layer 12 mm thick cement plaster 1:5 (1 cement: 5 coarse sand) finished with a top layer 6 mm thick cement plaster 1:6 (1 cement: 6 fine sand).					
		On Vertical faces in following araes					
		Boundry wall (each unit length for brick = 2.77m side)	152.00	724.19			
		Column sides	152.00	414.96			
		Total		1139.15	Sqm	134.10	152759.85
Stone Work							

11.29 Vol.2, Pg 130	40 mm thick fine dressed stone flooring over 20 mm (average) thick base of cement mortar 1:5 (1 cement : 5 coarse sand) including pointing with cement mortar 1:2 (1 cement : 2 stone dust) with an admixture of pigment to match the shade of stone. (minimum size of kota stone 0.25 m)					
	Boundry wall top	152.00	138.94			
	Boundry wall column top	152.00	27.36			
	Total		166.30	SqM	429.30	71393.96
10.25 Vol. 2, Pg 116	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.					
	10.25.2 In gratings, frames, guard bar, ladder, railings, brackets, gates and similar works.					
	Gate No-1,2 &3					
	Gate (area 5.814 sqm)	3.00	17.44			
	Total (sqm)		17.44			
	(A)Weight (37.9 kg per Sqm, as per design)		661.01			
	Mild Steel Grill work					
	Boundry wall grill (area 3.051sqm)	170.00	520.37			
	Total (sqm)		520.37			
	(B) Weight (43.4 kg per Sqm, as per design)		22584.06			
	Total (A+B)		23245.06	Kg	60.30	1401677.38
	Painting					
13.48.3 Vol. 2, Pg 162	Painting Steel work with Deluxe Multi Surface Paint to give an even shade. Two or more coat applied @0.90 ltr/10 sqm over an under coat of primer applied @ 0.80 ltr/ 10 sqm of approved brand or manufacture					
	Measurement as above					
	Grill as above	170.00	520.37			
	Gate (Area -5.814 sqm)	3.00	17.44			
	Total		537.81	sqm	58.50	31461.93
13.26 Vol. 2, Pg 159	Providing and applying 1.5 mm thick (in two coat) white cement based wall putty of best quality, over plastered surface to prepare the surface even and smooth complete.					
	Quantity as above in Plaster (External)		1139.15	SqM	73.80	84069.18
13.45. Vol. 2, Pg 161	Finishing walls with textured exterior paint of required shade :					
	New work (Two or more coats applied @ 3.28 ltr/10 sqm) over and including base coat of water proofing cement paint applied @ 2.20kg/10 sqm.					
	Quantity as above in External Plaster		1139.15	SqM	112.50	128154.24
TOTAL						46,86,476.24

ESTIMATE OF LANDSCAPE												
S.No	Item No. / SOR Vol	PARTICULARS	No	Length	Width	Depth/ Height	Quantity	UNIT	Rate (in Rs)	Reduced Rate As per Order	Amount	
1	23.1 MP PWD SOR	Trenching in ordinary soil up to a depth of 60cm including removal and stacking of serviceable materials and then disposing of surplus soil, by spreading and neatly leveling within a lead of 50m and making up the trcnchcd area to propr levels by filling with earth or earth mixed with sludge or/and manure before and after flooding trench with water (excluding cost of imported earth, sludge or manure)	1	300	3	0.6	540.00					
			1	200	3	0.6	360.00					
								900.00	cum	207.00	186.30	167670.00
2	23.2 MP PWD SOR	Supplying and stacking of good earth at site including royalty if any and carnage (earth measured in stacks will be reduced by 20% for payment)	1	300	3	0.2	180.00					
			1	200	3	0.2	120.00					
								300.00	cum	568.00	511.20	153360.00
3	23.3 MP PWD SOR	Supplying and stacking sludge at site including royalty and carriage (sludge measured in stacks will be reduced b 8% for payment)	1	300	3	0.2	180.00					
			1	200	3	0.2	120.00					
								300.00	cum	715.00	643.50	193050.00
4	23.4 MP PWD SOR	Supplying and stackmg at site dump manure from approved source, including carriage (manure measured in stacks will be reduced by 8% for payment):	1	300	3	0.2	180.00					
			1	200	3	0.2	120.00					
								300.00	cum	816.00	734.40	220320.00
5	23.5 MP PWD SOR	Rough dressing the trenched ground including breaking clods.	1	300	3		900.00					
			1	200	3		600.00					
								1500.00	100 sqm	495.00	445.50	6682.50
6	23.6 MP PWD SOR	Uprooting weeds from the trenched area after 10 to 15 days of its flooding with water including disposal of uprooted vegetation.	1	500	3		1500.00	100 sqm	168.00	151.20	2268.00	
7	23.7 MP PWD SOR	Fine dressing the ground	1	500	3		1500.00	100 sqm	126.00	113.40	1701.00	
8	23.8 MP PWD SOR	Spreading of sludge, dump manure and / or good earth in required thickness as per direction of Officer-in-charge (Cost of sludge, dump manure and /or good earth to be paid separately).	1	300	3	0.2	180.00	cum	18.00	16.20	2916.00	
9	23.9 MP PWD SOR	Mixing earth and sludge or manure in the required proportion specified or directed by the Officer-in-charge										
		Adding the quantity of earth and sludge manure					500.00	cum	12.00	10.80	5400.00	
10	23.1 MP PWD SOR	Grassing with selected type of grass including watering and maintenance of the lawn for 30 days or more till the grass forms a thick lawn, free from weeds and fit for mowing including supplying good earth. if needed (the good earth shall be paid for separately):										
		23.10.3 In rows 5 cm apart in both directions.	1	500	3		1500.00	100 sqm	4002.00	3601.80	54027.00	
11	23.13 MP PWD SOR	Preparation of beds for hedging and shrubbery excavating further 30cm deep of already prepared trench, refilling the excavated earth after breaking clods and mixing with sludge or manure in the ratio of 8:1 (8 parts of stacked volume of earth after reduction by 20% : one part of stacked volume of sludge or manure after reduction by 8%), flooding with water, filling with earth if necessary, watering and finally fine dressing, levelling etc. including stacking and disposal of materials declared unserviceable and surplus earth by spreading and levelling as directed, within a lead of 50m lift upto 1.5 m complete (cost of sludge, manure or extra earth to be paid for separately)	1	500	0.4	0.4	80.00	cum	75.00	67.50	5400.00	
12	23.14	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):										
			23.14.2 Holes 60 cm dia, and 60 cm deep.	50				50.00	each	68.00	61.20	3060.00
			23.14.3 holes 45 cm dia, and 45 cm deep.	100				100.00	each	21.00	18.90	1890.00

13	23.15 MP PWD SOR	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).										
	23.15.1	Any of one from Plameriya alba, fycus benjameena. Malkikeya champa. Begnonia plumaric pudoca Plants or Equivalent (1.8 mtrs to 2.10 mtrs height.	50				50.00	each	645.00	580.50	29025.00	
	23.15.2	Any of one from Lantana VAR Red, Lantana Blue White, Hemelia Mini. lantana varicated, ticoma Redicens, Spi Oala, Golden Dunanta or Equivalent. (height 0.3 m to 0.45m)	600				600.00	each	33.00	29.70	17820.00	
	23.15.3	Any of one from Hibiscus Vice Rai, Gul Phinia. Bamboo Varicated. Chandani Vencated, Hamilia Pattern, Bouganvella. Canna Red/Yellow, Taqwamonasia or Equivalent. (height 0.3 m to 0.45 m)	75				75.00	each	54.00	48.60	3645.00	
	23.15.4	Any Of one from Spathodia. Silver Oak, Thuja. Golden Bottle Brush, Exora Red or Equivalent (height 0.45 m to 0.60 m)	50				50.00	each	319.00	287.10	14355.00	
	23.15.5	Any Of one from Glerodendron, Allamamala New, Allamanda Bail, Thima Bouganvella or Equivalent	150				150.00	each	96.00	86.40	12960.00	
	23.15.7	Foxtail Palm or Equivalent (1.80mtrs to 2.10mtrs Height)	60				60.00	each	1784.00	1605.60	96336.00	
	23.15.9	Ficus Varicated or Equivalent (1.80mtrs to 2.10 mtrs height)	50				50.00	each	994.00	894.60	44730.00	
15	23.24 MP PWD SOR	Preparation of mounds of various size and shape by available excavated /supplied earth in layers not exceeding 20 cm in depth, breaking clods, watering of each layer, dressing etc lead upto 50 meter and lift upto 1.5 m complete as per direction Of Officer-in-charge .	100.00	5.00	4.00	0.60	100.00	cum	153.00	137.70	13770.00	
16	23.25 MP PWD SOR	Providing Circular Cement Concrete pots of specified size, cast with cement concrete of nominal mix 1:2:4 (1 cement: 2 sand; 4 graded stone aggregate 6 mm nominal size), reinforced With 7 Nos (3 nos. horizontal and 4 nos. vertical "U" shape) M.S. wires of 3.5 mm dia as per design, including required form work, finishing with cement punning on exposed Surface, Curing for specified period and stacking in required rows and height, all complete as per direction of Officer-in-charge .										
	23.25.1	Top inside dia 35 cm, outer bottom dia 25 cm, total height 35 cm with wall thickness of 25.4 mm.	175.00				175.00	each	152.00	136.80	23940.00	
17	17.4	Drilling of perfectly vertical bore hole of a diameter suitable to receive 150mm nominal diameter casing pipe upto desired depth below ground level inclusive of the labour charges for transporting, lowering and fixing of 150mm nominal diameter M,S./G.I./U.P.V.C. casing pipe inside the bore hole including all works pertaining to drilling such as transportation, installation and removal of drilling machine etc. complete.										
	17.4.1	in all types of collapsible strata consisting of soils, clays, sand, moorum, gravel, boulders etc.	75.00				75.00	mtr	335.00	301.50	22612.50	
	17.4.2	in all types of rocks.	25.00				25.00	mtr	429.00	386.10	9652.50	
TOTAL											11,06,590.50	