

**KARNATAKA NEERAVARI NIGAM LIMITED**

**CONSTRUCTION OF A BRIDGE CUM BARRAGE ACROSS THE MALAPRABHA RIVER AT CHIKKAHATTI HOLI VILLAGE, KHANAPUR TALUK, BELAGAVI DISTRICT ALONG WITH ALLIED WORKS INCLUDING SOPANAM, LEFT BANK PROTECTION AND CONNECTING ROADS FROM CHIKKAHATTI HOLI AND KARVINKOPPA VILLAGES TOGETHER WITH OPERATION AND MAINTENANCE FOR A PERIOD OF FIVE YEARS.**

**SCHEDULE - B**

<b>Item No.</b>	<b>Estimated Quantity</b>	<b>Description of item</b>	<b>Unit</b>	<b>Rate (Rs.)</b>	<b>Amount (Rs.)</b>
1	23.00	Dismantling of existing structures like culverts, bridges, retaining walls and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts and lead - Cement Concrete Grade M-15 & M-20 (By Mechanical Means)	m <sup>3</sup>	805.28	18521.44
2	225.00	Cutting of Trees, excluding removal of stumps and roots of trees - Girth from 300 mm to 600 mm	each	666.40	149940
3	215.00	Cutting of Trees, excluding removal of stumps and roots of trees - Girth above 1800 mm	each	3968.16	853154.4
4	225.00	Removal of stumps and roots including backfilling with suitable material to required compaction - Girth from 300 mm to 600 mm	each	398.72	89712
5	215.00	Removal of stumps and roots including backfilling with suitable material to required compaction - Girth above 1800 mm	each	809.76	174098.4
6	314.50	Clearing Grass and Removal of Rubbish & dumping to outside periphery by manual means.	100 m <sup>2</sup>	414.40	130328.8

7	204.34	Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned, including removal and disposal of top organic soil not exceeding 150 mm in thickness. - By Mechanical Means using Dozer, In area of light jungle.	100 m <sup>2</sup>	440.16	89942.29
8	4522.95	Loosening, leveling and Compacting original ground supporting embankment to facilitate placement of first layer of embankment, scarified to a depth of 150 mm, mixed with water at OMC and then compacted by rolling so as to achieve minimum dry density as given in Table 300-2 for embankment construction.	m <sup>2</sup>	117.60	531898.92
9	65.00	Cutting and removing jauliflora bushes upto 1.50 m girth excluding removal of stumps and including burning or disposing off the materials	each	28.56	1856.4
10	550.00	Cutting and removing jauliflora bushes above 1.50 m upto 3.00 m girth excluding removal of stumps and including burning or disposing off the materials as directed with all other ancillary operations complete.	each	56.56	31108
11	178285.00	Providing and placing sand bags consisting of empty cement bags filled with 35 to 40 kg locally available sand for forming ring bund including cost of all materials, labour, plugging joints with selected earth, and all other ancillary operations complete.	each	76.16	13578185.6
12	4863.00	Filling clayey soil between two rows of sand bags placed for forming ring bund including cost of all materials, labour, tamping, plugging leakage points and all other ancillary operations complete.	m <sup>3</sup>	539.84	2625241.92

13	51426.35	Earth work excavation for Foundation by mechanical means for all works & depth upto 3 m, as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, including dressing of excavated surfaces, disposing off or levelling the excavated earth or sorting & stacking the selected earth for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools, usage of machinery & other appurtenances required to complete the work. - In all kinds of soils Depth upto 3 m	m <sup>3</sup>	114.24	5874946.22
14	4951.00	Earth work excavation for Foundation by mechanical means for all works & depth upto 3 m, as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, including dressing of excavated surfaces, disposing off or levelling the excavated earth or sorting & stacking the selected earth for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools, usage of machinery & other appurtenances required to complete the work. - In all kinds of soils Depth upto (3.00 to 6.00m)	m <sup>3</sup>	131.04	648779.04
15	4575.30	Earth work excavation for Foundation by mechanical means for all works & depth upto 3 m, as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, including dressing of excavated surfaces, disposing off or levelling the excavated earth or sorting & stacking the selected earth for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools, usage of machinery & other appurtenances required to complete the work. - In ordinary/soft rock without blasting upto 1.5 m depth	m <sup>3</sup>	406.56	1860133.97

16	5044.22	Earth work excavation for Foundation by mechanical means for all works & depth upto 3 m, as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, including dressing of excavated surfaces, disposing off or levelling the excavated earth or sorting & stacking the selected earth for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools, usage of machinery & other appurtenances required to complete the work. Depth exceeding 1.5 m, but not exceeding 3 m	m <sup>3</sup>	476.00	2401048.72
17	1992.00	Earth work excavation for Foundation by mechanical means for all works & depth upto 3 m, as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, including dressing of excavated surfaces, disposing off or levelling the excavated earth or sorting & stacking the selected earth for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools, usage of machinery & other appurtenances required to complete the work. - Depth exceeding 4.5m, but not exceeding 6m	m <sup>3</sup>	544.49	1084624.08
18	2563.00	Earth work excavation for Foundation by mechanical means for all works & depth upto 3 m, as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, including dressing of excavated surfaces, disposing off or levelling the excavated earth or sorting & stacking the selected earth for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools, usage of machinery & other appurtenances required to complete the work. - Depth exceeding 6m, but not exceeding 7.5m	m <sup>3</sup>	571.71	1465292.73

19	1950.00	Earth work excavation for Foundation by mechanical means for all works & depth upto 3 m, as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, including dressing of excavated surfaces, disposing off or levelling the excavated earth or sorting & stacking the selected earth for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools, usage of machinery & other appurtenances required to complete the work. - Depth exceeding 7.5m, but not exceeding 9m	m <sup>3</sup>	600.30	1170585
20	934.00	Earth work excavation for Foundation by mechanical means for all works & depth upto 3 m, as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, including dressing of excavated surfaces, disposing off or levelling the excavated earth or sorting & stacking the selected earth for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools, usage of machinery & other appurtenances required to complete the work. - Depth exceeding 9m, but not exceeding 10.5m	m <sup>3</sup>	630.31	588709.54
21	816.00	Earth work excavation for Foundation by mechanical means for all works & depth upto 3 m, as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, including dressing of excavated surfaces, disposing off or levelling the excavated earth or sorting & stacking the selected earth for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools, usage of machinery & other appurtenances required to complete the work. - Depth exceeding 10.5m, but not exceeding 12m	m <sup>3</sup>	661.83	540053.28

22	105.00	Earth work excavation for Foundation by mechanical means for all works & depth upto 3 m, as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, including dressing of excavated surfaces, disposing off or levelling the excavated earth or sorting & stacking the selected earth for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools, usage of machinery & other appurtenances required to complete the work. - Depth exceeding 12m, but not exceeding 13.5m	m <sup>3</sup>	694.92	72966.6
23	1486.00	Excavation for foundation in hard rock of all toughness including boulders above 0.6 m diameter ( 0.113 m3 ) for dam, spillway, intake structure, surface power house and other appurtenant structures by approved controlled blasting methods including control of vibration by use of delay detonators and control of fly rocks by muffling arrangements and placing the excavated rock neatly in specified dump area as directed including cost of all materials, machinery, labour and all other ancillary operations complete. (Organisation specific)	m <sup>3</sup>	817.60	1214953.6
24	850.00	Drilling 50 mm dia. holes vertical or inclined upto 10 degrees to vertical in rock / masonry / concrete by percussion drilling method using waggon drill or any other suitable equipment including cost of all materials, machinery, labour, redrilling through partially set grout wherever required etc., complete.	m	399.84	339864
25	850.00	Flushing grout holes of all sizes with water and air jets alternatively for an average period of 30 minutes and observing water intake after flushing including cost of all materials, machinery, labour and all other ancillary operations complete..	m	73.92	62832
26	21.25	Grouting with neat cement grout mix of suitable consistency under specified grout pressure as directed in drilled holes by stage grouting method including cost of all materials, machinery, labour, redrilling if necessary and all other ancillary operations complete. - Consolidation grouting	t	14640.64	311113.6

27	357.00	Providing and fixing 25 mm dia 2.75 m long ribbed steel anchor rods with one end split and driven firmly using steel wedge into 1.25 m deep 38 mm dia hole drilled in bed rock and other end provided with L-bend for embedding in concrete / masonry for spillway and appurtenatnt works including cost of all materials, machinery, labour, steel wedge, drilling and cleaning hole, filling hole with thick cement slurry, driving anchor rod and all other ancillary operations complete.	each	1317.12	470211.84
28	15986.00	Preparing foundation bed for masonry or concrete by removing all loose material by wedging / chiselling and disposing off the same as directed and cleaning the surface with air and water jet including cost of all materials, machinery, labour and all other ancillary operations complete. (Organisation specific)	m <sup>2</sup>	61.60	984737.6
29	1603.63	Providing and laying in position Cement Concrete for levelling course for all works in foundation. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed, laid in layers not exceeding 150 mm thickness, well compacted using plate vibrators, including all lead & lifts, cost of all materials of quality, labour, Usage charges of machinery, curing, and all the other appurtenances required to complete the work as per technical specifications - Mix 1:3:6 (M10) Using 40 mm nominal size graded crushed coarse aggregates	m <sup>3</sup>	6628.16	10629116.22
30	110.80	Providing and laying in position Cement Concrete for levelling course for all works in foundation. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed, laid in layers not exceeding 150 mm thickness, well compacted using plate vibrators, including all lead & lifts, cost of all materials of quality, labour, Usage charges of machinery, curing, and all the other appurtenances required to complete the work as per technical specifications - Mix 1:3:6 (M10) Using 40 mm nominal size graded crushed coarse aggregates - PCC for Open Foundation - Mix 1:3:6 (M10) Using 20 mm nominal size graded crushed coarse aggregates	m <sup>3</sup>	6884.64	762818.11

31	57.20	Providing and laying in position Reinforced cement concrete for all Foundation works. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticizers laid in finished layers, well compacted using needle vibrators, including all lead & lifts, cost of all materials, quality confirming to the requirements of relevant IS codes , labour, Usage charges of machinery, curing and all the other appurtenances required to complete the work as per technical specifications. (The cost of steel reinforcement & formwork to be paid separately - M20 Design Mix Using 20 mm nominal size graded crushed coarse aggregates	m <sup>3</sup>	6926.08	396171.78
32	7.00	Providing and laying in position Reinforced cement concrete for all Foundation works. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticizers laid in finished layers, well compacted using needle vibrators, including all lead & lifts, cost of all materials, quality confirming to the requirements of relevant IS codes , labour, Usage charges of machinery, curing and all the other appurtenances required to complete the work as per technical specifications. (The cost of steel reinforcement & formwork to be paid separately - M25 Design Mix Using 20 mm nominal size graded crushed coarse aggregates	m <sup>3</sup>	7532.18	52725.26
33	439.48	Providing and laying in position Reinforced cement concrete for all Foundation works. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticizers laid in finished layers, well compacted using needle vibrators, including all lead & lifts, cost of all materials, quality confirming to the requirements of relevant IS codes , labour, Usage charges of machinery, curing and all the other appurtenances required to complete the work as per technical specifications. (The cost of steel reinforcement & formwork to be paid separately - M25 Design Mix Using 20 mm nominal size graded crushed coarse aggregates	m <sup>3</sup>	7253.21	3187640.73



34	8331.45	Providing and laying in position Reinforced cement concrete for all Sub structures of building, Irrigation works, Sub structure works of bridges, Drain works & other parallel works from 0.50m to 3.50 m height. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers, laid in layers, well compacted using needle vibrators, providing weep holes wherever necessary, including all lead & lifts, cost of all materials of quality, confirming to the requirements of relevant IS codes, labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. M20 Design Mix Using 20 mm nominal size graded crushed coarse aggregates - For 0 to 5m Height	m <sup>3</sup>	7803.62	65015469.85
35	1688.20	Providing and laying in position Reinforced cement concrete for all Sub structures of building, Irrigation works, Sub structure works of bridges, Drain works & other parallel works from 0.50m to 3.50 m height. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers, laid in layers, well compacted using needle vibrators, providing weep holes wherever necessary, including all lead & lifts, cost of all materials of quality, confirming to the requirements of relevant IS codes, labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. M20 Design Mix Using 20 mm nominal size graded crushed coarse aggregates - For 5 to 10m Height	m <sup>3</sup>	7903.95	13343448.39

36	215.10	Providing and laying in position Reinforced cement concrete for all Sub structures of building, Irrigation works, Sub structure works of bridges, Drain works & other parallel works from 0.50m to 3.50 m height. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers, laid in layers, well compacted using needle vibrators, providing weep holes wherever necessary, including all lead & lifts, cost of all materials of quality, confirming to the requirements of relevant IS codes, labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. M20 Design Mix Using 20 mm nominal size graded crushed coarse aggregates - For 10 to 15m Height	m <sup>3</sup>	7920.67	1703736.12
37	4585.90	Providing and laying in position Reinforced cement concrete for all Sub structures of building, Irrigation works, Sub structure works of bridges, Drain works & other parallel works from 0.50m to 3.50 m height. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers, laid in layers, well compacted using needle vibrators, providing weep holes wherever necessary, including all lead & lifts, cost of all materials of quality, confirming to the requirements of relevant IS codes, labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications.M25 Design Mix Using 20 mm nominal size graded crushed coarse aggregates - For 0 to 5m Height	m3	7811.14	35821106.93

38	840.40	Providing and laying in position Reinforced cement concrete for all Sub structures of building, Irrigation works, Sub structure works of bridges, Drain works & other parallel works from 0.50m to 3.50 m height. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers, laid in layers, well compacted using needle vibrators, providing weep holes wherever necessary, including all lead & lifts, cost of all materials of quality, confirming to the requirements of relevant IS codes, labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications.M25 Design Mix Using 20 mm nominal size graded crushed coarse aggregates	m3	7671.66	6447263.06
39	3.00	Providing and laying in position Reinforced cement concrete for all Sub structures of building, Irrigation works, Sub structure works of bridges, Drain works & other parallel works from 0.50m to 3.50 m height. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers, laid in layers, well compacted using needle vibrators, providing weep holes wherever necessary, including all lead & lifts, cost of all materials of quality, confirming to the requirements of relevant IS codes, labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications.M25 Design Mix Using 20 mm nominal size graded crushed coarse aggregates - Plinth beams	m3	10461.36	31384.08

40	2.00	Providing and laying in position Reinforced cement concrete for all Sub structures of building, Irrigation works, Sub structure works of bridges, Drain works & other parallel works from 0.50m to 3.50 m height. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers, laid in layers, well compacted using needle vibrators, providing weep holes wherever necessary, including all lead & lifts, cost of all materials of quality, confirming to the requirements of relevant IS codes, labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications.M25 Design Mix Using 20 mm nominal size graded crushed coarse aggregates - Columns till plinth	m3	11856.21	23712.42
41	670.70	Providing and laying in position Reinforced cement concrete for all Sub structures of building, Irrigation works, Sub structure works of bridges, Drain works & other parallel works from 0.50m to 3.50 m height. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers, laid in layers, well compacted using needle vibrators, providing weep holes wherever necessary, including all lead & lifts, cost of all materials of quality, confirming to the requirements of relevant IS codes, labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications.M25 Design Mix Using 20 mm nominal size graded crushed coarse aggregates - For 5 to 10 m Height	m3	7911.57	5306290

42	151.30	Providing and laying in position Reinforced cement concrete for all Sub structures of building, Irrigation works, Sub structure works of bridges, Drain works & other parallel works from 0.50m to 3.50 m height. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers, laid in layers, well compacted using needle vibrators, providing weep holes wherever necessary, including all lead & lifts, cost of all materials of quality, confirming to the requirements of relevant IS codes, labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications.M25 Design Mix Using 20 mm nominal size graded crushed coarse aggregates - For 10 to 15 m Height	m3	7928.31	1199553.3
43	5.00	Providing and laying in position Reinforced cement concrete for all Super structures of building , Road works, Water works, Irrigation works & super structure works of bridges upto 3.50 m height. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers laid in layers, well compacted using needle vibrators. The cost includes all lead & lifts, cost of all materials, quality confirming to the requirements of relevant IS codes , labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. (The cost of steel reinforcement, dowel bars & formwork to be paid separately) - M25 Design Mix Using 20 mm nominal size graded crushed coarse aggregates - Columns	m3	12821.54	64107.7

44	4.00	Providing and laying in position Reinforced cement concrete for all Super structures of building , Road works, Water works, Irrigation works & super structure works of bridges upto 3.50 m height. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers laid in layers, well compacted using needle vibrators. The cost includes all lead & lifts, cost of all materials, quality confirming to the requirements of relevant IS codes , labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. (The cost of steel reinforcement, dowel bars & formwork to be paid separately) - M25 Design Mix Using 20 mm nominal size graded crushed coarse aggregates - Columns-Beams&Lintel Beams	m3	12067.33	48269.32
45	7.00	Providing and laying in position Reinforced cement concrete for all Super structures of building , Road works, Water works, Irrigation works & super structure works of bridges upto 3.50 m height. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers laid in layers, well compacted using needle vibrators. The cost includes all lead & lifts, cost of all materials, quality confirming to the requirements of relevant IS codes , labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. (The cost of steel reinforcement, dowel bars & formwork to be paid separately) - M25 Design Mix Using 20 mm nominal size graded crushed coarse aggregates - Columns-Beams&Lintel Beams - Slab	m3	11313.12	79191.84

46	1055.80	Providing and laying in position Reinforced cement concrete for all Super structures of building , Road works, Water works, Irrigation works & super structure works of bridges upto 3.50 m height. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers laid in layers, well compacted using needle vibrators. The cost includes all lead & lifts, cost of all materials, quality confirming to the requirements of relevant IS codes , labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. (The cost of steel reinforcement, dowel bars & formwork to be paid separately) - M30 Design Mix Using 20 mm nominal size graded crushed coarse aggregates.	m <sup>3</sup>	8644.07	9126409.11
47	430.90	Supplying, fitting and placing TMT FE 550 / 550D Steel Reinforcement including cost of all materials, machinery, labour, cleaning, straightening, cutting, bending, hooking, laping / welding joints, tying with binding wire / soft annealed steel wire and other ancillary operations complete as per drawing and technical specification - Dam & Allied Works	t	89275.20	38468683.68
48	77.67	Supplying, fitting and placing TMT FE 550 / 550D Steel Reinforcement including cost of all materials, machinery, labour, cleaning, straightening, cutting, bending, hooking, laping / welding joints, tying with binding wire / soft annealed steel wire and other ancillary operations complete as per drawing and technical specification - All other type of structures	t	78118.88	6067493.41
49	2.55	Supplying, fitting and placing TMT FE 550 / 550D Steel Reinforcement including cost of all materials, machinery, labour, cleaning, straightening, cutting, bending, hooking, laping / welding joints, tying with binding wire / soft annealed steel wire and other ancillary operations complete as per drawing and technical specification - Buildings	t	89818.40	229036.92

50	759.00	Providing rubble stone/boulder filling between or behind abutment below apron including cost of all materials, labour, hand packing, finishing top surface & all necessary works as directed and complete as per specification.	m <sup>3</sup>	1431.36	1086402.24
51	933.40	Providing and constructing dry size stone pitching using 200 to 250 mm size stones with pin headers at 2 per m <sup>2</sup> using stones and stone chips from approved source including cost of all materials, labour, hand packing / wedging stone chips into joints, finishing and all other ancillary operations complete. - 450 mm thick with 150 thick murum bed	m <sup>2</sup>	628.32	586473.89
52	67.90	Providing and fixing 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. In stringers, treads, landings etc. of stair cases, including use of chequered plate wherever required, all complete including cost of materials, labour, usage charges of machinery complete as per specifications and as per directions of the Engineer-in-Charge.	kg	118.72	8061.09
53	0.10	Painting with black anti-corrosive bitumastic paint of approved brand and manufacture to give an even shade :Two coats on new work including preparing the surface after thoroughly cleaning oil, grease, dirt and foreign matter, cost of materials, labour complete as per specifications and as per directions of Engineer-in-charge.	m <sup>2</sup>	105.28	10.53
54	3.20	Providing, fitting and fixing mild steel railing complete as per drawing and Technical Specification	m	4959.36	15869.95
55	329.00	Providing and constructing contraction joints by fixing 230 mm wide central bulb type PVC water stop in single line supported by 10 mm dia. steel dowel rods on either side at 1 metre interval including cost of all materials, machinery, labour, vulcanizing water seal joints and all other ancillary operations complete.	Rm	632.80	208191.2



56	57.00	Providing and laying Cement concrete wearing coat M-30 grade including reinforcement complete as per drawing and Technical Specifications. (Batching Plant)	m <sup>3</sup>	14657.44	835474.08
57	17311.00	Back filling behind abutment, wing wall and return wall complete including compaction as per drawing and Technical Specification	m <sup>3</sup>	1308.16	22645557.76
58	72.00	Providing and foming expansion joint for spillway bridge consisting of 75 x 75 x 6 mm angles 2 numbers provided with 250 mm long 12 mm dia. anchors fixed to both flanges at 150 mm c / c and 140 x 6 mm plate welded on top of one of the angle including cost of all materials, labour, machinery, providing and fixing 38 mm thick joint filler board matching the thickness of wearing coat, painting and all other ancillary operations complete.	m	2791.04	200954.88
59	72.00	Providing and fixing in position 20 mm thick premoulded joint filler in expansion joint for fixed ends of simply supported spans not exceeding 10 m to cater for a horizontal movement upto 20 mm, covered with sealant complete as per drawing and technical specifications.	m	258.72	18627.84
60	136.00	Providing and fixing GI pressure relief pipe with one end closed by perforated GI plate and other end provided with alluminium lid hinged to pipe including cost of all materials, labour, drilling 8 mm dia holes and all other ancillary operations complete. - 50 mm diameter and 750 mm long	each	586.88	79815.68
61	136.00	Providing and forming 350x 350 x 400 mm deep filter drain consisting of 75 mm thick 10 mm down coarse aggregate layer around pressure relief pipe and 75 mm thick sand layer around coarse aggregate layer including cost of all materials, labour, excavation of pit and all other ancillary operations complete	each	114.24	15536.64
62	1360.00	Providing weep holes in Brick masonry/Plain/ Reinforced concrete abutment, wing wall/ return wall with PVC Pipe 110mm outer dia at 2 kg per m2, extending through the full width of the structure with slope of 1V :20H towards drawing foce. Complete as per drawing and Technical Specifications	m	267.68	364044.8

63	80.00	Providing and laying of Filter media with granular materials/stone crushed aggregates satisfying the requirements laid down in clause 2504.2.2. of MoRTH specifications to a thickness of not less than 600 mm with smaller size towards the soil and bigger size towards the wall and provided over the entire surface behind abutment, wing wall and return wall to the full height compacted to a firm condition complete as per drawing and Technical Specification.	m <sup>3</sup>	2998.24	239859.2
64	62.10	Design, fabrication, supply, erection, testing and commissioning of vertical lift sliding type all interchangeable ( except bottom element ) stoplog gate elements consisting of skin plate, horizontal and vertical girders, stiffeners, lifting pins, bronze padded slide blocks, guide shoes, rubber seals, clamps etc., with all accessories for spillway including cost of all materials,machinery, labour,cutting,aligning, welding, finishing, cleaning, applying one coat of zinc rich epoxy primer and three coats cold applied coal tar epoxy paint, seal fixing etc., complete as per specifications and approved drawings with all lead and all lifts including packing / forwarding charges for other materials.	t	143974.92	8940842.53
65	40.50	Design, fabrication, supply, erection and commissioning of embedded parts consisting of sill beam, wheel tracks, seal seats, guide rails, breast wall liner ( upto one vent height plus 1 m above the roof of vent) with all accessories for river / canal sluice service gate including cost of all materials, machinery, labour, cutting, aligning, anchoring,welding, finishing, cleaning, applying one coat zinc rich epoxy primer and four coats of cold applied coal tar epoxy paint and all other ancillary operations complete as per specifications and approved drawings.	t	233118.22	9441287.91

66	87.00	Providing and injecting chemical emulsion for Pre-constructional Anti-Termite Treatment, creating continuous chemical barrier under and around the column pits, walls, trenches, basement excavation, top surface of the plinth filling, junction of wall and floor, along the external perimeter of building, expansion joints, over the top surface of consolidated earth on which apron is to be laid, surrounding of pipes and conduits with Chlorpyriphos 20% E.C. / Lindane 20% E.C. @ 3.19 l/m2 including cost of chemical, diluting in water to one percent concentration, labour, usage charges of machinery, complete as per specifications	m <sup>2</sup>	132.16	11497.92
67	8.00	Providing Size Stone masonry with hard stone in foundation & plinth with Cement mortar 1:6 (1 cement : 6 coarse sand)	m <sup>3</sup>	7127.68	57021.44
68	230.00	Filling available excavated earth ( excluding rock ) in sides of foundations upto plinth in layers not exceeding 20 cms. in depth, compacting each deposited layer by ramming after watering with lead upto 50 m. and lift upto 1.5 m. including cost of all labour complete as per specifications.	m <sup>3</sup>	297.92	68521.6
69	23.00	Providing Brick work with common burnt clay Non Modular bricks of class designation 3.5 in superstructure above plinth level in all shapes and sizes in Cement mortar 1:6 (1 cement : 6 coarse sand) including cost of all materials, labour, scaffolding and usage charges of machinery & other incidental charges complete as per the direction of engineer incharge of work.	m <sup>3</sup>	8901.76	204740.48
70	178.70	Providing 12 mm cement plaster with cement mortar 1:4 (1 cement: 4 fine sand) to brick masonry including rounding off corners wherever required smooth rendering, providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications and as per directions of Engineer-in-charge. - Ceiling Plastering & Inside plastering	m <sup>2</sup>	283.36	50636.43

71	134.00	Providing 18 mm cement plaster in two coats under layer 12 mm thick cement plaster with cement mortar 1:5 (1 cement : 5 coarse sand) finished with a top layer 6 mm thick cement plaster with cement mortar 1:6 (1 cement : 6 fine sand) to brick masonry including rounding off corners wherever required smooth rendering, providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications and as per directions of Engineer-in-charge.	m <sup>2</sup>	413.28	55379.52
72	2.00	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):With float glass panes of 4.0 mm thickness (weight not less than 10kg/ m <sup>2</sup> ) including cost of materials, labour, usage charges of machinery complete as per specifications and as per directions of the Engineer-in-Charge.	m <sup>2</sup>	1106.56	2213.12
73	25.00	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. Fixed to steel windows by welding.	kgs	204.96	5124
74	68.00	Providing and laying 52 mm thick cement concrete flooring with concrete hardener topping, under layer 40 mm thick cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) and top layer 12 mm thick cement hardener consisting of mix 1:2 (1 cement hardener mix : 2 graded stone aggregate 6 mm nominal size) by volume, hardening compound mixed @ 2 L per 50 kg of cement or as per direction of Engineer incharge.	m <sup>2</sup>	888.16	60394.88

75	13.00	Supplying and fixing rolling shutters of approved make, made of required size M.S. laths, interlocked together through their entire length and jointed together at the end by end locks, mounted on specially designed pipe shaft with brackets, side guides and arrangements for inside and outside locking with push and pull operation complete, including the cost of providing and fixing necessary 27.5 cm long wire springs manufactured from high tensile steel wire of adequate strength conforming to IS: 4454 - part 1 and M.S. top cover of required thickness for rolling shutters. 80x1.25 mm M.S. laths with 1.25 mm thick top cover including cost of materials, labour, usage charges of machinery complete as per specifications and as per directions of the Engineer-in-Charge.	m <sup>2</sup>	2948.96	38336.48
76	178.00	Providing and applying white cement based putty of average thickness 1 mm, of approved brand and manufacturer, over the plastered wall surface to prepare the surface even and smooth complete as per specifications and as per directions of Engineer in charge.	m <sup>2</sup>	112.00	19936
77	178.00	Wall painting with premium acrylic emulsion paint of interior grade, having VOC (Volatile Organic Compound ) content less than 50 grams/ litre of approved brand and manufacture, including applying additional coats wherever required to achieve even shade and colour. One coats as per specifications and as per directions of Engineer in charge.	m <sup>2</sup>	81.76	14553.28
78	134.00	Finishing walls with Premium Acrylic Smooth exterior paint with Silicone additives with pure Acrylic Resin, UV resistant, dirt & pick up resistant, Alkali & Water resistant of required shade: New work (Two coats applied @ 1.43 L/10 m <sup>2</sup> over and including priming coat of exterior primer applied @ 2.20 kg/10 m <sup>2</sup> ) with paint of approved quality to give an even shade, after thoroughly brooming the surface to remove all dirt, dust, mortar drops and foreign matter including preparing the surface even and sand paper smooth, cost of materials, labour complete as per specifications and as per directions of Engineer-in-charge.	m <sup>2</sup>	199.36	26714.24

79	55.00	Providing and laying water proofing treatment to the Roof with PU based single component elastomeric pure polyurethane based coating on New terrace/Chajjas/Sunken portion of WC:Bathroom, cold applied PU waterproofing membrane that is highly elastic with elongation greater than 400% and tensile strength greater than 2MPa as per ASTM D412. The waterproofing membrane to be applied in 2coats @ 1.6 kg/m2 to achieve final DFT (Dry Film Thickness) of 1mm including prime coat of epoxy primer @150 g/m2 and protection with 120gsm Geo-textile over the waterproofing membrane. The finished cost to include surface preparation, making coving at Junction, Bore Packing, treatment of construction joints completely as per specification.	m <sup>2</sup>	915.04	50327.2
80	10.00	Providing and fixing on wall face unplasticised Rigid PVC rain water pipes conforming to IS : 13592 Type A, including jointing with seal ring conforming to IS : 5382, leaving 10 mm gap for thermal expansion, (i) Single socketed pipes 75 mm diameter	m	220.64	2206.4
81	4337.30	Providing and laying flooring with burnt stone slabs 10 cms thick rough chistle dressed on cement mortar bed 1:6, 25 mm thick, and pointed with cement mortar 1:3, , including cost of materials, mortar, labour, curing complete as per specifications.	m <sup>2</sup>	2670.08	11580937.98
82	1227.84	Providing and laying boulders apron on river bed for protection against scour with stone boulders weighing not less than 40 kg each complete as per drawing and Technical specification. - Boulder Laid Dry Without Wire Crates.	m <sup>3</sup>	2141.44	2629345.69
83	12.50	Providing and constructing un-coursed rubble stone masonry with approved stones in CM 1 : 4 proportion by volume portions of return walls/abutments/ similar structure including cost of all materials, labour, cleaning, batching and mixing mortar, packing mortar and wedging stone chips into joints, finishing, curing and all other ancillary operations complete. - For Sub-Structure	m <sup>3</sup>	4779.04	59738

84	3906.00	Providing and constructing gabion structures for erosion control, river training works and protection works with wire crates of size 2 m x 1 m x 0.3 m each divided into 1m compartments by cross netting, made from 4 mm galvanised steel wire @ 32 kg per 10 sqm having minimum tensile strength of 300 Mpa conforming to IS:280 and galvanizing coating conforming to IS:4826, woven into mesh with double twist, mesh size not exceeding 100 mm x 100 mm, filled with boulders with least dimension of 200 mm, all loose ends to be securely tied with 4 mm galvanised steel wire.	m <sup>3</sup>	4138.40	16164590.4
85	2130.00	Providing and constructing vertical /inclined graded filter media using clean, hard graded sand and coarse aggregates from approved source satisfying specified filter criteria in layers of specified thickness including cost of all materials, machinery, labour, laying to required slopes, compacting and all other ancillary operations complete as per specifications and approved drawings. - Sand layer.	m <sup>3</sup>	2343.04	4990675.2
86	10407.00	Providing casing embankment using semi-pervious / pervious soil collected in embankment area in heaps as part of disposal of excavated soil from canal in layer of 250 to 300 mm (before compaction) including cost of all materials,machinery, labour,all other operations such as spreading soil in layer of specified thickness, sorting-out, breaking clods, levelling, sectioning edges / sides, watering, compacting each layer to density control of not less than 95 percent or as stipulated by power roller and all other ancillary operations complete.	m <sup>3</sup>	147.84	1538570.88
87	626.10	Construction of Embankment with approved materials deposited at site from roadway cutting and excavation from drain and foundation of other structures graded with desired compaction.	m <sup>3</sup>	133.28	83446.61

88	1738.86	Construction of Embankment by excavating the available approved Gravel/Murum deposited at a place or borrow pits during or prior excavation with all lifts and lead, transportation to site, spreading, grading to required slope and compacting to meet the requirement complete as per specifications, including cost of labour,rolling,water,all materials,usage& all other appurtenances required to complete the work.	m <sup>3</sup>	530.88	923126
89	13039.30	Construction of sub-grade and earthen shoulders with approved material obtained from borrow pits with all lifts & leads, transporting to site, spreading, grading to required slope and compacted to meet requirement of table No. 300-2	m <sup>3</sup>	552.16	7199779.89
90	4167.92	Construction of Granular Sub-Base of required grading as per design mixing in a mechanical mix plant at OMC, carriage of mixed Material to work site, spreading in uniform layers with motor grader on prepared surface and compacting with vibratory power roller to achieve the desired density, complete as per clause 401 A Plant Mix Method (v) For Grading -V Material	m <sup>3</sup>	2785.44	11609491.08
91	593.73	Construction of dry lean cement concrete Sub- base over a prepared sub-grade with coarse and fine aggregate conforming to IS: 383, the size of coarse aggregate not exceeding 25 mm, aggregate cement ratio not to exceed 14:1, aggregate gradation after blending to be as per table 600-1, cement content not to be less than 140 kg/ m3 , optimum moisture content to be determined during trial length construction, concrete strength not to be less than 7 Mpa at 7 days, mixed in a batching plant, transported to site, laid with a paver with electronic sensor, compacting with 8-10 t vibratory roller, finishing and curing.	m <sup>3</sup>	5461.12	3242430.78



92	1091.20	<p>Pavement Quality Concrete using paver - M30 Grade</p> <p>Construction of M30 Grade un-reinforced, dowel jointed, plain cement concrete pavement over a prepared sub base with OPC @ 270 kg/m<sup>3</sup> and GGBS@ 90 kg/m<sup>3</sup>, coarse and fine aggregate conforming to IS 383:2016, maximum size of coarse aggregate not exceeding 25 mm, mixed in a batching and mixing plant as per approved mix design transported to site, laid with a paver finisher, spread, compacted and finished in a continuous operation including provision of contraction, expansion, construction and longitudinal joints, joint filler, separation</p> <p>Construction of M30 Grade un-reinforced, dowel jointed, plain cement concrete pavement over a prepared sub base with OPC @ 270 kg/m<sup>3</sup> and GGBS@ 90 kg/m<sup>3</sup>, coarse and fine aggregate conforming to IS 383:2016, maximum size of coarse aggregate not exceeding 25 mm, mixed in a batching and mixing plant as per approved mix design transported to site, laid with a paver finisher, spread, compacted and finished in a continuous operation including provision of contraction, expansion, construction and longitudinal joints, joint filler, separation</p>	m <sup>3</sup>	8300.32	9057309.18
93	40.10	<p>Earth work excavation by manual means for drains, canals, waste weir, draft, approach channels, key trenches, foundation of Buildings &amp; bridges and such similar works in all kinds of soils, as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, removal of stumps and other deleterious matter, excavated surface leveled and sides neatly dressed disposing off the excavated stuff or sorting &amp; stacking the selected stuff for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools &amp; other appurtenances required to complete the work.- In all kinds of soils Depth upto 1.5 m</p>	m <sup>3</sup>	271.04	10868.7

94	360.00	A. Type - A, "W" : Metal Beam Crash Barrier Providing and erecting a "W" metal beam crash barrier system comprising of 3 mm thick corrugated sheet metal beam rail, 70 cm above road/ground level, fixed on ISMC series channel vertical post, 150 x 75 x 5 mm spaced 2m centre to centre, 1.8 m high, 1.1 m below ground/road level, all steel parts and fitments to be galvanised by hot dip process, all fittings to conform to IS:1367 and IS:1364, metal beam rail to be fixed on the vertical post with a spacer of channel section 150 x 75 x 5 mm, 330 mm long complete as per clause 811	m	4076.80	1467648
95	377.34	Providing and laying Filter material underneath pitching in slopes complete as per drawing and Technical specification. As per MoRT &H Technical Specification Clause 2504 .	m <sup>3</sup>	3400.32	1283076.75
96	1152.07	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	m <sup>3</sup>	2141.44	2467088.78
97	125.78	Providing Cement mortar 1:3 (1 cement : 3 fine sand) including cost of all materials, labour and usage charges of machinery complete as per the direction of engineer incharge of work.	m <sup>3</sup>	5921.44	744798.72
98	360.00	Cast in Situ Cement Concrete M 20 Kerb with Channel Construction of cement concrete kerb with channel with top and bottom width 115 and 165 mm respectively, 250 mm high in M 20 grade PCC on M10 grade foundation 150 mm thick, kerb channel 300 mm wide, 50 mm thick in PCC M20 grade, sloped towards the kerb, kerb stone with channel laid with kerb laying machine, foundation concrete laid manually, all complete as per clause 409 - a) PCC M15 grade for kerb base	m	267.68	96364.8

99	360.00	Cast in Situ Cement Concrete M 20 Kerb with Channel Construction of cement concrete kerb with channel with top and bottom width 115 and 165 mm respectively, 250 mm high in M 20 grade PCC on M10 grade foundation 150 mm thick, kerb channel 300 mm wide, 50 mm thick in PCC M20 grade, sloped towards the kerb, kerb stone with channel laid with kerb laying machine, foundation concrete laid manually, all complete as per clause 409 - b) PCC M20 grade for kerb Cast in Situ	m	409.92	147571.2
100	1346.85	Road Marking with Hot Applied Thermoplastic Compound with Reflectorising Glass Beads on Bituminous Surface Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads @ 250 g/m2 area, thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC:35:2015.The finished surface to be level, uniform and free from streaks and holes.	m <sup>2</sup>	593.60	799490.16
101	20.00	Providing and fixing of retro- reflectorised cautionary, mandatory and informatory sign as per IRC:67:2012 made of Class C Type XI retro reflective sheeting fixed over 2 mm thick aluminium sheeting vide clause 801.3, 3mm/4mm thick Aluminium composite material sheet depending on the size of the sign fixed over the back support frame of min 25 x 25 x 3mm angle mounted on a mild steel circular pipe 65 NB, 3.2 mm thickness firmly fixed to the ground by means of properly designed foundation with M25 grade cement concrete 45 cm x 45 cm x 60 cm, 60 cm below ground level as per approved drawing.The sign shall be maintained as per section 12 of IRC:67:2012. - 900 MM Equilateral triangle type XI	each	5303.20	106064

102	8.00	Providing and fixing of retro- reflectorised cautionary, mandatory and informatory sign as per IRC:67:2012 made of Class C Type XI retro reflective sheeting fixed over 2 mm thick aluminium sheeting vide clause 801.3, 3mm/4mm thick Aluminium composite material sheet depending on the size of the sign fixed over the back support frame of min 25 x 25 x 3mm angle mounted on a mild steel circular pipe 65 NB, 3.2 mm thickness firmly fixed to the ground by means of properly designed foundation with M25 grade cement concrete 45 cm x 45 cm x 60 cm, 60 cm below ground level as per approved drawing.The sign shall be maintained as per section 12 of IRC:67:2012. - 75 mm high octagon	each	6059.20	48473.6
103	10.00	Providing and fixing of retro- reflectorised cautionary, mandatory and informatory sign as per IRC:67:2012 made of Class C Type XI retro reflective sheeting fixed over 2 mm thick aluminium sheeting vide clause 801.3, 3mm/4mm thick Aluminium composite material sheet depending on the size of the sign fixed over the back support frame of min 25 x 25 x 3mm angle mounted on a mild steel circular pipe 65 NB, 3.2 mm thickness firmly fixed to the ground by means of properly designed foundation with M25 grade cement concrete 45 cm x 45 cm x 60 cm, 60 cm below ground level as per approved drawing.The sign shall be maintained as per section 12 of IRC:67:2012. - 60 cm circular	each	4856.32	48563.2
104	4.00	Providing and fixing of retro- reflectorised cautionary, mandatory and informatory sign as per IRC:67:2012 made of Class C Type XI retro reflective sheeting fixed over 2 mm thick aluminium sheeting vide clause 801.3, 3mm/4mm thick Aluminium composite material sheet depending on the size of the sign fixed over the back support frame of min 25 x 25 x 3mm angle mounted on a mild steel circular pipe 65 NB, 3.2 mm thickness firmly fixed to the ground by means of properly designed foundation with M25 grade cement concrete 45 cm x 45 cm x 60 cm, 60 cm below ground level as per approved drawing.The sign shall be maintained as per section 12 of IRC:67:2012. - 600mm x 45 mm rectangular	each	4771.20	19084.8

105	6.00	<p>Direction and Place Identification Signs with size more than 0.9 m2 size Board.</p> <p>Providing and erecting direction and place identification retroreflectorised sign as per IRC:67:2022 made of high intensity grade sheeting vide clause 801.3, fixed over aluminium sheeting, 2 mm thick or Aluminium composite material sheet with overall thickness of 4mm with area exceeding 0.9 m2 fixed over back support frame of min 40 x 40 x 5mm angle mounted on a mild steel circular pipe 65 NB, firmly fixed to the ground by means of properly designed foundation with M25 grade cement concrete 45 x 45 x 60 cm, 60 cm below ground level as per approved drawing</p>	m <sup>2</sup>	10846.08	65076.48
106	3.60	<p>Providing and erecting direction and place identification retro-reflectorised sign as per IRC:67:2012 made of high intensity grade sheeting vide clause 801.3, fixed over aluminium sheeting, 2 mm thick or Aluminium composite material sheet with overall thickness of 4mm with area not exceeding 0.9 m2 fixed over back support frame of min 35 x 35 x 3mm angle mounted on a mild steel circular pipe 65 NB, firmly fixed to the ground by means of properly designed foundation with M25 grade cement concrete 45 x 45 x 60 cm, 60 cm below ground level as per approved drawing</p>	m <sup>2</sup>	10074.40	36267.84

107	1634.00	Supplying and Fixing of Molded Shank Raised Pavement Markers / Cat's Eye made of polycarbonate and ABS moulded body and reflective panels with micro prismatic lens capable of providing total internal reflection of the light entering the lens face and shall support a load of 16000 kg tested in accordance to ASTM D 4280 Type H and complying to Specifications of Category A of MORTH Circular No RW/NH/33023/10-97 DO III Dt 11.06. 1997. The height, width and length shall not exceed 50 mm, 100 mm and 102 +/- 2 mm and with minimum reflective area of 13 cm <sup>2</sup> on each side and the slope to the base shall be 35 +/- 5 degree. The strength of detachment of the integrated cylindrical shanks, (of diameter not less than 19 +/- 2 mm and height not less than 30 +/- 2 mm) from the body is to be a minimum value of 500 Kg. Fixing will be by drilling holes on the road for the shanks to go inside, without nails and using epoxy resin based adhesive as per manufacturer's recommendation and complete as directed by the engineer. The contractor shall submit a two year warranty for satisfactory field performance including stipulated retro-reflectance of the reflecting panel, to the Engineer.	No	408.80	667979.2
108	12.00	Supplying and installation of delineators (road way indicators, hazard markers, object markers), 80-100 cm high aboveground level, painted black and white in 15 cm wide strips, fitted with 80 x 100 mm rectangular or 75 mm dia circular reflectorised panels at the top, buried or pressed into the ground and conforming to IRC-79 and the drawings.	each	2263.52	27162.24

109	998.16	Earth work in surface excavation by mechanical means for lowering & leveling the ground for all works other than foundation in all kinds of soils & upto depth not exceeding 300mm as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, removal of stumps and other deleterious matter including dressing of excavated surfaces, disposing off or levelling the excavated earth or sorting & stacking the selected earth for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools, usage of machinery & other appurtenances required to complete the work. - Chute Drain For Slope of Embankment-BHS	m <sup>3</sup>	106.40	106204.22
110	125.00	Providing and laying reinforced cement concrete pipe NP3 for culverts on first class bedding of granular material in single row including fixing collar with cement mortar 1:2 but excluding excavation, protection works, backfilling, concrete and masonry works in head walls and parapets Clause 1101.6. - For 1000 mm Dia	m	8912.96	1114120
111	48.00	Boundary pillar / Guard Stone Reinforced cement concrete M15 grade boundary pillars of standard design as per IRC:25, fixed in position including finishing and lettering but excluding painting - Boundary pillar / Guard Stone	each	820.96	39406.08
112	13125.00	Scarifying the existing bituminous road surface to a depth of 50 mm and disposal of scarified material by Mechanical Means using Hydraulic excavator with in all lifts and lead	m <sup>2</sup>	6.72	88200
113	2625.00	Dismantling of Flexible pavements and disposal of dismantled materials and stacking serviceable and unserviceable materials separately II) By Mechanical Means ii) Granular courses	m <sup>3</sup>	59.36	155820

114	10675.00	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/grader in sub-base / base course on well prepared surface and compacting with vibratory roller to achieve the desired density. - Wet Mix Macadam (Plant Mix Method)	m <sup>3</sup>	2866.08	30595404
115	19950.00	Providing and applying primer coat with SS1 grade Bitumen Emulsion on prepared surface of granular base including cleaning of road surface and spraying primer at the rate of 0.70kg per m2 using mechanical means. - Prime Coat over WMM/WBM	m <sup>2</sup>	45.92	916104
116	19250.00	Providing and applying tack coat with VG-10 Bitumen using pressure distributor at the rate of 0.20 kg/m2 on the prepared bituminous surface cleaned with mechanical broom - Tack coat on Bituminous surface	m <sup>2</sup>	13.44	258720
117	1197.00	Providing and laying Bituminous Macadam with 40/60 TPH capacity hot mix plant using crushed aggregates of specified grading premixed with bituminous binder VG-30 @ 3.4% by weight of mix, transported to site, laid over a previously prepared surface with mechanical paver finisher to the required grade, level and alignment and rolled as per clauses 501.6 and 501.7 to achieve the desired compaction - (ii) Bituminous Macadam Grading - II for traffic <20 MSA	m <sup>3</sup>	8580.32	10270643.04
118	577.50	Providing and laying Semi Dense Bituminous Concrete with 40/60 TPH capacity hot mix plant batch type using crushed aggregates of specified grading premixed with bituminous binder VG-30 @ 5% by weight of mix and filler, transported to site, laid over a previously prepared surface with mechanical paver finisher to the required grade, level and alignment and rolled as per MoRTH V revision - Semi Dense Bituminous Concrete	m <sup>3</sup>	11370.24	6566313.6



119	7000.00	Surface Drains in Soil Construction of unlined surface drains of average crosssectional area 0.40 m <sup>2</sup> in soil to specified lines, grades, levels and dimensions. Excavated material to be used in embankment with a lift upto 3m and lead of 50 m (average lead 25 m) as per Technical Specification Clause 307. - (B) Mechanical Means	m	28.00	196000
120	10000.00	Cutting and burning or disposing off Apu / Jundu from marshy areas as directed with all other ancillary operations complete.	m <sup>2</sup>	10.53	105300
121	749.00	Excavation and removal of silt and silt mixed with sand from canal bed by manual means including disposing off the same in spoil bank or on the canal embankment in layers as directed with all other ancillary operations complete - in slussy condition.	m <sup>3</sup>	398.72	298641.28
122	200.00	Engaging Heavy Mazdoor for clearing debries encountered during removal of gates from vents after storage period etc., Complete with all leads and lifts and as per the directions of the Engineer-in-charge.	Man/ days	651.75	130350
123	1825.00	Watchman	Man/ days	651.75	1189443.75
124	266142.90	Removing the MS element stoplog Gate for Barrages/ Vented Dam including conveying of gates to Store Yard and Stacking as directed including cost of labour, & all necessary works as directed and complete as per per specification. a) Water storage height upto 3.00m	Kg	6.72	1788480.29
125	44357.20	Removing the MS element stoplog Gate for Barrages/ Vented Dam including conveying of gates to Store Yard and Stacking as directed including cost of labour, & all necessary works as directed and complete as per per specification. b) Water storage height 3.00m to 4.00m	Kg	4.48	198720.26
126	266142.90	Inserting the MS element stoplog Gate for Barrages/ Vented Dam including conveying of gates from Store Yard to Barrage/ Vented Dam as directed including cost of labour, & all necessary works as directed and complete as per per specification.a) Water storage height upto 3.00m	Kg	5.60	1490400.24

127	44357.20	Inserting the MS element stoplog Gate for Barrages/ Vented Dam including conveying of gates from Store Yard to Barrage/ Vented Dam as directed including cost of labour, & all necessary works as directed and complete as per per specification.b) Water storage height 3.00m to 4.00m	Kg	3.36	149040.19
128	270.00	Supplying and fixing rubber seals of approved quality including cost of all materials, labour, removing existing worn out / damaged bulb type rubber seals from gates, cleaning surface, making holes in new seals, fixing new seals / bolts / nuts / washers tightly in position, scaffolding with all other ancillary operations complete. - Flat rubber seals and hot dipped G.I bolts / nuts / washers.	m	1470.56	397051.2
129	496.80	Cleaning gates / hoists / embedded parts for re-painting by removing rust, old paint, grease by using wire brush, scrubber, rust remover including cost of all materials, labour, machinery, scaffolding, applying a coat of rust inhibitive compound with all other ancillary operations complete.	m <sup>2</sup>	106.40	52859.52
		<b>Total Amount put to Tender</b>			<b>413945323.26</b>