MANGALURU SMART CITY

1.1 Grand Summary for Under Ground Drainage Zone-3 (Part-2)

Sr. No.	Description	Cost In INR
1	Underground Drainage	24187274
2	Utility Shifting -Compound wall,Culvert and RCC Drain	12,33,457
3	Electrical Pole Shifting	8,36,649
	Total Cost	2,62,57,380
	Add Tender Premium @ 5%	13,12,869
	Add Contingency @ 3%	7,87,721
	Taxes as applicable @4%	10,50,295
	Adminstrative charges, Miscellaneous and rounding off (LS)	5,91,735
	Grand Total	3,00,00,000

Executive Engineer MSCL Mangaluru

GM Techcnical MSCL Mangaluru

Managing Director MSCL Mangaluru

MANGALURU SMART CITY

1.2 BOQ of UNDERGROUND DRAINAGE FOR Zone-3 (Part-2)

BOQ item	Specification	Unit	Quantity	Rate	Amount	Remarks
No.	UNDERGROUND DRAINAGE					
	UNDERGROUND BRAINAGE					
1	KSRRB200-8. Clearing and grubbing road land including uprooting rank vegetation, grass, brush, shrubs, saplings and trees of girth upto 300mm, by manual means, in area of light jungle, removal of stumps, disposal of unserviceable materials, stacking of serviceable materials labour charges complete as per specifications KSRB Pg No.136,SI No.18.11	Sqm	5972.00	6.72	40,132	
2	Cutting asphalt road surface for pipeline trenches and disposing off the excavated stuff with all lead and lift as directed including barricading,danger lighting etc., KUWSDB-15-16 SI No.5.2,Pg No.17	Cum	922.00	647.36	5,96,866	
3	Cutting Concrete road surface for pipeline trenches and disposing off the excavated stuff with all lead and lift as directed including barricading,danger lighting etc., KUWSDB-15-16 SI No.5.3,Pg No.17	Cum	102.44	1298.08	1,32,981	
4	Taking out existing CC interlocking paver blocks from footpath/ central verge, including removal of rubbish etc., disposal of unserviceable material to the dumping ground, for which payment shall be made separately and stacking of serviceable material within 50 metre lead as per direction of Engineer-in-Charge.(As per Data Rate)	Sqm	154.64	36.83	5,695	
5	Earthwork excavation for pipeline trenches (Except building work) including barricading depositing on bank with all lead including danger lighting and using sight rails and boning rods including shoring, strutting, bailing out water at every 100 meters wherever neccessary as directed in the following Strata KUWSDB SR 15-16,SI No 1-i-(a),Pg No 5 do in all soils mixed mixed with boulders of 30 cms size upto an exclusive of disintegrated rock D182					
	0 to 2mtr depth	Cum	3434.88	196.00	6,73,237	
	2 to 4mtr depth	Cum	143.77	259.84	37,358	
	- 10	Ouiii	140.77	200.04	07,000	
6	Earthwork excavation for pipeline trenches (Except building work) including barricading depositing on bank with all lead including danger lighting and using sight rails and boning rods including shoring,strutting,bailing out water at every 100 meters wherever neccessary as directed in the following Strata KUWSDB SR 15-16,SI No 1-ii-(a),Pg No 5 In disintegrated rock, soft rock, soft shale, medium hard rock comprising of lime stone, sand stone, hard shale, schiest, fissured rock without resorting to blasting					
	0 to 2mtr depth	Cum	429.36	442.40	1,89,949	
	2 to 4mtr depth	Cum	95.85	495.04	47,450	
7	Earthwork excavation for pipeline trenches (Except building work) including barricading depositing on bank with all lead including danger lighting and using sight rails and boning rods including shoring, strutting, bailing out water at every 100 meters wherever neccessary as directed in the following Strata KUWSDB SR 15-16,SI No 1-iii-(a),Pg No 7					
	In hard laterite rock or hard laterite rock containing iron ore upto 20% by chistelling and trimming to proper slope					
	0 to 2mtr depth	Cum	306.69	674.24	2,06,780	
	2 to 4mtr depth	Cum	68.46	807.52	55,286	

BOQ item	Specification	Unit	Quantity	Rate	Amount	Remarks
No.						
8	Earthwork excavation for pipeline trenches (Except building work) including barricading depositing on bank with all lead including danger lighting and using sight rails and boning rods including shoring, strutting, bailing out water at every 100 meters wherever neccessary as directed in the following Strata KUWSDB SR 15-16,SI No 1-iv-(a),Pg No 7 In hard laterite rock containing iron ore above 20% by chistelling and trimming to proper slope					
	0 to 2mtr depth	Cum	85.87	1430.24	1,22,818	
	2 to 4mtr depth	Cum	47.92	1500.80	71,926	
	2 to 4mil depth	Ouin	17.02	1000.00	7 1,020	
9	Earthwork excavation for pipeline trenches (Except building work) including barricading depositing on bank with all lead including danger lighting and using sight rails and boning rods including shoring, strutting, bailing out water at every 100 meters wherever neccessary as directed in the following Strata KUWSDB SR 15-16,SI No 1-vi-(a),Pg No 9 In hard rock by Controlled blasting					
	, ,					
	0 to 2mtr depth	Cum	122.67	1413.44	1,73,393	
	2 to 4mtr depth	Cum	136.93	1565.76	2,14,397	
10	Earthwork excavation for pipeline trenches (Except building work) including barricading depositing on bank with all lead including danger lighting and using sight rails and boning rods including shoring, strutting, bailing out water at every 100 meters wherever neccessary as directed in the following Strata KUWSDB SR 15-16,SI No 1-v-(a),Pg No 7					
	In hard rock by chistelling					
	0 to 2mtr depth	Cum	61.34	1780.80	1,09,229	
	2 to 4mtr depth	Cum	68.46	1910.72	1,30,816	
					.,,	
11	Earthwork Excavation by Mechanical Means Earthwork in excavation for pipeline trenches beyond 600mm and 1500mm trench width as per drawing and technical specification,including setting out,construction of shoring,strutting,barricading,danger lighting,bracing,using sight rails and boning rods at every 100 meters wherever neccessary as directed,removal of slumps and other deleterious matter,dressing of sides and levelling the bottom of trench to the extent required,utilising the available excavated earth locally for the work etc.,complete in the following strata. KUWSDB SR 15-16,SI No Vii 3,Pg No 11					
	a) - do - In ordinary/All soils/Hard soil	Cum	1533.71	107.52	1,64,905	
	b) -do- In Ordinary Rock (not requiring blasting)	Cum	433.92	146.72	63,664	
	c) -do- In Hard Rock (requiring blasting)	Cum	77.88	847.84	66,030	
12	Providing course sand bedding for the pipeline trenches including watering and consolidation by punners etc.,complete with all lead and lift (In black cotton and rock reaches) KUWSDB 15-16,Pg No 17,SI No.6	Cum	51.52	1809.92	93,244	

BOQ	Specification	Unit	Quantity	Pata	Rate Amount	
item No.	Specification	Onit	Quantity	Kale	Amount	Remarks
13	Providing Muram/Gravel Bedding for the pipeline trenches including watering and consolidation by punners etc., complete with all lead and lift as directed including barricading, danger lighting etc., as directed by the Engineer-in-Charge etc., complete, for all type of soils excluding black cotton soil and rock reaches. KUWSDB Pg No.17,SI No.6.1,6.2	Cum	360.63	276.64	99,764	
14	KSRB 4-1.6; Providing and laying in position plain cement concrete of mix 1:2:4 with cement @ 240kgs, with 20mm and down size graded granite metal coarse aggregates @ 0.69 cum and fine aggregtes @ 0.459cum, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation, plinth and cills, ncluding cost of all materials, labour, HOM of machinery, curing complete as per specifications. Specification No. KBS 4.1, 4.2. KSRB 16-17, Pg No.12,SI No.4.6	Cum	103.04	6093.92	6,27,898	
15	Supplying Unplasticised PVC pipes confirming to IS 15328:2003 with latest amendments ended with integral sockets with ISI mark and conveying to worksite,rolling and lowering into trenches,Laying true to line and level and perfect linking at joints,testing and commissioning,including loading and unloading at both destinations and cuts of pipes wherever necessary including jointing of UPVC Pipes (with cost of elastomeric sealing rings) and specials (excluding cost of specials) with jointing of approved type,with all labour with all lead and lift including encasing the pipe alround to a depth of not less than 15cms with soft gravel or selected earth available from the excavation etc.,complete and giving neccessary hydraulic test to the required pressure as per ISS (Contractor will make his own arrangements for procuring water for testing)					
а	Supply and laying of PVC- U Pipes as per IS 15328 SN 4 - Ring tite: 200mm	Rmt	2403.00	804.40	19,32,973	
16	Supplying Unplasticised PVC pipes confirming to IS 15328:2003 with latest amendments ended with integral sockets with ISI mark and conveying to worksite,rolling and lowering into trenches,Laying true to line and level and perfect linking at joints,testing and commissioning,including loading and unloading at both destinations and cuts of pipes wherever necessary including jointing of UPVC Pipes (with cost of elastomeric sealing rings) and specials (excluding cost of specials) with jointing of approved type,with all labour with all lead and lift including encasing the pipe alround to a depth of not less than 15cms with soft gravel or selected earth available from the excavation etc.,complete and giving neccessary hydraulic test to the required pressure as per ISS (Contractor will make his own arrangements for procuring water for testing)					
а	Supply and laying of PVC- U Pipes as per IS 15328 SN 8 - Ring tite: 110mm	Rmt	2520.00	305.96	7,71,019	
17	Construction RCC M25 circular inspection chamber 600 mm dia x 600mm depth (clear inside dimension) for single pipeline, with M15 PCC bed for 100 mm thick using mix with cement @240 kgs granite graded metal of 20 mm and down size and clean sieved river sand , M25 RCC raft & sidewall concrete with 20mm and downsize granite metal, , finish smooth with a floating coat of cement on walls and bed concrete complete , including fixing and grouting of pipes, including conveying to work spot supply and fixing SFRC manhole cover and frame (Heavy Duty) confirming to IS: 12592 with latest amendments as per standard design including cost of reinforcement, all materials, labour charges, curing complete as per specifications.	Nos	242.00	6637.00	16,06,154	

BOQ							
item	Specification	Unit	Quantity	Rate	Amount	Remarks	
No.	·		_				
18	Making connections of drain or sewer line of size 100mm to 230mm external dia with existing manhole including breaking into and making good the walls, floors with cement concrete M15 with 20mm and downsize granite metal mix cement plastered on both sides with cement mortar 1:3 finished with a floating coat of neat cement and making necessary channels for the drain etc., complete PWD SR 2016-17,Sl No.11.47.3,Pg No.73	Nos	13.00	1942.08	25,247		
19	Constructing RCC Manhole chamber of 1:1.5:3 proportion or approved type pre-cast RCC manhole chambers, constructed using form vibrators of standard type, with barricading, danger lighting and using of sight rails and boning rods wherever necessary, shoring and strutting wherever required using ordinary port land cement, using 1:1.5:3 proportion RCC with 20 mm and down graded jelly, well graded sand and steel of approved quality, 200 mm thick top concrete slab, having wall thickness and raft thickness as in approved drawings and with an offset in raft alround the chamber as in approved drawing, benching concrete with 1:6 slope towards the central drain finished smooth, including fixing and grouting of pipes, including conveying to work spot supply and fixing SFRC manhole cover and frame (Heavy Duty) confirming to IS: 12592 with latest amendments, on a bed of CC 1:2:4 supplying and fixing of minimum 3 mm thick encapsulated plastic footsteps (as per IS 10910) on 12 mm dia. Grade Fe-415 steel bar (as per IS 1786) staggered at 300 mm apart as detailed in Technical specifications, including sand bedding wherever required, disposal of surplus earth, watering, curing, engraving manhole number with flow direction on the inner cylindrical surface etc., complete						
a	including cost of reinforcement steel and fabrication charges 1.2 Meter Dia Manhole						
<u> </u>	For 1.1m Depth	Nos	4.00	44077.60	1,76,310		
	For 1.2m Depth	Nos	44.00	45641.12	20,08,209		
	For 1.3m Depth	Nos	13.00	47124.00	6,12,612		
	For 1.4m Depth	Nos	6.00	48686.40	2,92,118		
	For 1.5m Depth	Nos	6.00	50248.80	3,01,493		
	For 1.6m Depth	Nos	12.00	51812.32	6,21,748		
	For 1.7m Depth	Nos	5.00	53373.60	2,66,868		
	For 1.8m Depth	Nos	3.00	54857.60	1,64,573		
<u> </u>	For 1.9m Depth	Nos	2.00	56420.00	1,12,840		
-	For 2.0m Depth For 2.2m Depth	Nos Nos	2.00 2.00	58387.84 61588.80	1,16,776 1,23,178		
	For 2.3m Depth	Nos	2.00	63189.28	1,26,379		
	For 2.4m Depth	Nos	2.00	64789.76	1,29,580		
	For 2.5m Depth	Nos	2.00	66390.24	1,32,780		
	For 2.6m Depth	Nos	2.00	67990.72	1,35,981		
	For 2.7m Depth	Nos	1.00	69591.20	69,591		
	For 2.8m Depth	Nos	3.00	71191.68	2,13,575		
	For 2.9m Depth	Nos	2.00	72792.16	1,45,584		
	For 3.0m Depth	Nos	3.00	74392.64	2,23,178		
<u> </u>	For 3.1m Depth	Nos	4.00	95601.97	3,82,408		
 	For 3.2m Depth	Nos	1.00	97524.90	97,525		
b	1.5 meter Dia Manhole						
D D	For 3.8m Depth	Nos	1.00	109062.46	1,09,062		
 	For 4.3m Depth	Nos	2.00	121127.22	2,42,254		
	For 4.6m Depth	Nos	1.00	129346.11	1,29,346		
	For 4.9m Depth	Nos	1.00	137565.01	1,37,565		
			50	12.000.01	.,5.,550		

BOQ						
item	Specification	Unit	Quantity	Rate	Amount	Remarks
No. 20	Refilling Pipeline Trenches and foundation with selected available earth from trench excavation and foundation including watering, consolidation in layers of 15cms., thick including disposing off the surplus earth with all lead and lift. KUWSDB Pg No 15, SI No 2	Cum	3212.52	66.08	2,12,283	
21	Removal of Unserviceable Soil with Disposal KSRRB M300-19. Removal of unserviceable soil including excavation, loading and disposal but excluding replacement by suitable soil which shall be paid separately as per clause 300.5 complete as per specifications. MORTH Specification No. 301 KPWD Pg No. 144, SI No.19.20					
	5 Km Distance	Cum	4426.27	135.52	5,99,848	
22	KSRRB M400-6.2. Construction of Granular Sub-base by Providing Close graded cushed stone aggregates of granite /trap/basalt material spreading in uniform layers with motor grader on prepared surface, mixing by mix in place method by rotavator at OMC, and compacting with vibratory power roller to achieve the desired density, complete as per specifications. B. By mix in place Method For grading II material KSRB Pg No.155,20.5.2	Cum	1527.26	1576.96	24,08,421	
23	KSRRB M400-Wet Mix macadam KSRRB M400-17. Providing, laying, spreading and compacting cushed stone aggregates of granite/trap/ basalt to wet mix macadam specification including per mixing the material with water at OMC in Mechanical mix plant carriage of mixed material by tipper to site, laying in uniform layers with paver in subbase/base course on well prepared surface and compacting with vibratory roller to achieve the desired density complete as per specification. MORTH Specification NO.406 KSRB Pg No 158,20.18	Cum	1272.71	1868.16	23,77,631	
24	KSRRB M500-6. Providing and applying primer coat with S.S. bitumen emulsion on prepared surface of granular base such as WMM including cleaning of road surface and spraying primer at the rate of 0.60 kg / sqm using mechanical means complete as per specifications. MORTH Specification No. 502 KSRB Pg No.161,SI No:21.6	Sqm	5090.85	29.12	1,48,246	
25	Providing and laying bituminous macadam on prepared surface with crushed coarse aggregates as per design mix formula for base / binding course including loading of aggregates with F.E loader, hot mixing of stone aggregates and bitumen in hot mix plant 40/60 TPH capacity, transporting the mixed material in tipper to paver and laying mixed materials with paver finisher to the required level and grade, rolling by power roller to achieve the desired density, 50 / 75 mm compacted thickness with 3.4% bitumen but excluding cost of primer/tack coat with all lead and lift including cost of materials, labour, HOM of machineries complete as per specifications. MORTH Chapter 5, using 60/70 grade bitumen, Including environmental and social safe guards, including all taxes, as directed by the Engineer-in-Charge etc., complete. 50mm thick KSRRB Pg No.162,SI No. 21.11.6	Cum	254.54	6054.72	15,41,184	

BOQ item	Specification	Unit	Quantity	Rate	Amount	Remarks
26	KSRRB 500-7. Providing and applying tack coat using 80/100 grade bitumen(VG10) on the prepared black topped surfaces at 2.5 kg per 10 sqm, heating bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials, labour, HOM of machineries complete as per specifications. MORTH/Chapter 5	Sqm	5090.85	13.44	68,421	
27	Providing and laying Semi dense bituminous concrete with 40-60 TPH batch type HMP producing an average output of 75 tonnes per hour using crushed aggregates of specified grading, premixed with bituminous binder at 4.5 to 5% of mix and filter, transporting the hot mix to work site, laying with a hydrostatic paver finisher with mechanical paver to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MORTH specification clause no. 500.8, 25 mm compacted thickness with 5% bitumen 60/70 grade using 40-60 HMP (Grading II) using mechnical paver, with all lead and lift ,Labour, as per specification, Including environmental and social safe guards, including all taxes, as directed by the Engineer-in-Charge etc., complete. 25mm thick	Cum	127.27	7778.40	9,89,967	
28	Dewatering for Lowering of water table to creat dry conditions at least upto the bed of the excavation including the cost of material, labour T & P articles & machinery laying sewer line & Manholes as per approved drawings according. to the requirement of the construction of structure. The cost of this work shall be inclusive of disposal of water pumped out at a safe place away from the structure. The dewatering will work till the completion of the structure as per approved drawings ,with all horizontal leads and lifts etc., complete in all respects as per specification and as directed by engineer. During the execution of work enough precaution should be taken by the contractor to ensure that the clear water flows from the delivery pipe of pumps to avoid any settlement of soil during the process. (A s per Data Rate)	Day	75.00	4218.20	3,16,365	
29	KSRB 14.6-2 :Providing and laying heavy duty cobble stones 75mm thick interlock pavers, using cement and course sand for manufacture of blocks of approved size, shape and colour with a minimum compressive strength of 281 kg per sqm over 50mm thick sand bed (average thickness) and compacting with plate vibrator having 3 tons compaction force thereby forcing part of sand underneath to come up in between joints, final compaction of paver surface joints into its final level, including cost of materials, labour and HOM of machineries complete as per specifications. PWD (16-17,Pg No.101,SI No.14.7)	Sqm	178.72	1086.40	1,94,162	
	Total				2,41,87,274	
	UTILITY SHIFTING					
1	KSRRB M200-13.2. Dismantling of existing structures like culverts, bridges, retaining walls and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts complete as per specifications. II.By Mechanical Means. MORTH Specification No. 202 KSRRB Pg No.137,SI No.18.21	Cum	51.91	673.12	34,943	
2	KSRRB M200-14.2. Dismantling of existing structures like culverts, bridges, retaining walls and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts complete as per specifications. ii) Dismantling brick/Tile work B. In cement mortar. MORTH Specification No. 202 KSRRB Pg No.137,SI No.18.23	Cum	22.25	273.28	6,080	

BOQ item No.	Specification	Unit	Quantity	Rate	Amount	Remarks
В	COMPOUND WALL					
1	KSRB 2-2.1 : Earthwork excavation for foundation of buildings, water supply, sanitary lines and electrical conduits either in pits or in trenches 1.5m and above in width, in ordinary soil not exceeding 1.5 m. in depth including dressing the bottom and sides of pits and trenches, stacking the excavated soil clear from edges of excavation with lead upto 50 m. after breaking of clods complete as per specifications. specification. No. KBS 2.1(a) / 2.3.5 KSRRB Pg No.5,SI No.2.3	Cum	68.40	211.68	14,479	
2	KSRB 4-1.1: Providing and laying in position plain cement concrete of mix 1:2:4 with OPC cement @ 240kgs, with 40mm and down size graded granite metal coarse aggregates @ 0.878cum and fine aggregates @ 0.459cum machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation, including cost of all materials, labour, HOM of machinery, curing complete as per specifications. Specification No. KBS 4.1, 4.2 KSRRB Pg No.12,SI No.4.1	Cum	12.09	5838.56	70,585	
3	Providing and constructing granite / trap / basalt size stone masonry in foundation with cement mortar 1:6 stone hammerd dressed in courses not less than 20 cms high, bond stones at two m. apart in each course including cost of materials, labour, curing complete as per specifications. KBS 5.1.13 KSRRB Pg No.254,SI No.34.8.2	Cum	43.20	4689.44	2,02,584	
4	Providing & constructing laterite size stone masonry in CM 1:6 including cost and conveyance of all materials curing, etc complete as per specification I.S. 3620 / 1979 having compressive strength not less than 3.5 N/mm2 for saturated dry samples. For super structure in CM 1:6 (Cement 45 kgs/M3) (Ground Floor) KSRRB Pg No.267,SI No.37.66.1	Cum	18.58	4939.20	91,768	
5	KSRB15-3.11: Providing 20mm thick cement plaster in single coat with cement mortar 1:4, to stone masonry & concrete surface including rounding off corners wherever required smooth rendering,: Providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications. KSRRB Pg No.114,SI No.15.19	Sqm	224.48	262.08	58,832	
6	KSRB 15-16.1: Providing and finishing external walls in two coats with waterproof cement paint of approved brand and shade to give an even shade after throughly brooming the surface to remove all dirt and loose powdered material, free from mortar drops and other foreign matter cost of materials, labour, complete as per specifications with primer. KSRRB Pg No.118,SI No.15.53.2	Sqm	224.48	94.08	21,119	
7	KSRB 2.3: Filling available excavated earth (excluding rock) in sides of foundations upto plinth in layers not exceeding 20cms. In depth, compacting each deposited layer by ramming after watering with lead upto 50m. and lift upto 1.5m. including cost of all labour complete as per specifications. Specification No. KBS 2.9 KSRRB Pg No.6,SI No.2.10	Cum	22.80	142.24	3,243	
С	CULVERT					
1	KSRB 2-2.1: Earthwork excavation for foundation of buildings, water supply, sanitary lines and electrical conduits either in pits or in trenches 1.5m and above in width, in ordinary soil not exceeding 1.5 m. in depth including dressing the bottom and sides of pits and trenches, stacking the excavated soil clear from edges of excavation with lead upto 50 m. after breaking of clods complete as per specifications. specification. No. KBS 2.1(a) / 2.3.5 KSRB Pg No 5,SI No.2.3	Cum	103.52	211.68	21,912	

BOQ item No.	Specification	Unit	Quantity	Rate	Rate Amount	
2	KSRRB M2900- PCC 1:3:6 in Foundation KSRRB M2900-1. Plain cement concrete 1:3:6 mix with crushed stone aggregate 40 m nominal size mechanically mixed, placed in foundation and compacted by vibration including curing complete as per specifications MORTH Specification No. 408 KSRB Pg No.253,SI No.34.1	Cum	5.65	4966.08	28,046	
3	Providing and constructing granite / trap / basalt size stone masonry in foundation with cement mortar 1:6 stone hammerd dressed in courses not less than 20 cms high, bond stones at two m. apart in each course including cost of materials, labour, curing complete as per specifications. KBS 5.1.13 KSRB Pg No.254,SI No.34.8.2	Cum	16.60	4689.44	77,856	
4	Providing and constructing granite / trap / basalt size stone masonry in basement with cement mortar 1:6, edges of stones chistle dressed in courses not less than 15 cms high, bond stones at two m. apart in each course including cost of materials, labour, curing complete as per specifications. KSRB Pg No.254,SI No.34.9	Cum	11.34	5605.60	63,568	
5	Providing flush pointing to square rubble, course or uncoursed stone masonry with cement mortar, 20mm deep, after raking joints to depth of 20mm nicely lining, including cost of materials, labour, curing complete as per specifications. – do – cement mortar 1:4 KSRB Pg No.254,SI No.34.12.1	Sqm	37.80	108.64	4,107	
6	Providing and laying reinforced cement concrete pipe NP3 for culverts including pointing ends, and fixing collars with cement mortar 1:2 including cost of all materials, labour, curing complete as per specifications. Specifications. No. KSRB 1000, 2300 MOST Specification No.1000 / 2300 - 300mm. dia KSRB Pg No.253,SI No.34.6.1	Rmt	25.00	1772.96	44,324	
7	Providing and constructing granite / trap / basalt size stone masonry in basement with cement mortar 1:6, edges of stones chistle dressed in courses not less than 15 cms high, bond stones at two m. apart in each course including cost of materials, labour, curing complete as per specifications. KSRB Pg No.254,SI No.34.9	Rmt	25.00	3099.04	77,476	
8	KSRB 2.3: Filling available excavated earth (excluding rock) in sides of foundations upto plinth in layers not exceeding 20cms. In depth, compacting each deposited layer by ramming after watering with lead upto 50m. and lift upto 1.5m. including cost of all labour complete as per specifications. Specification No. KBS 2.9 KSRB Pg No.6,SI No.2.10	Cum	34.51	142.24	4,908	
D	RCC DRAINS					
1	Earthwork excavation for foundation of buildings, water supply, sanitary lines and electrical conduits either in pits or in trenches 1.5m and above in width, in Ordinary Soil not exeeding 1.5 m.in depth including dressing the bottom and sides of pits and trenches, stacking the excavated soil clear from edges of excavation with lead upto 50 m after breaking of clods complete as per specificationsincluding clearing vegetation, shoring, strutting, dewatering if required,and ramming with selected earth for foundation and disposing off excess excavated material as approved by Engineer etc. complete with all lead and lift including danger lighting wherever necessary as directed in the following strata. KSRB Pg No.5,SI No.2.3	Cum	85.19	211.68	18,032	

BOQ item No.	Specification	Unit	Quantity	Rate	Rate Amount	
2	Providing and laying in position plain cement concrete of mix 1:2:4 with OPC cement @ 240kgs, with 40mm and down size graded granite metal coarse aggregates @0.878cum and fine aggregates @0.459cum machine mixed, concrete laid in layers not exceeding 15 cms thick, well compacted in foundation,plinth and cills, including cost of all materials, labour, HOM of machineries, curing complete as per specifications. KSRB Pg No 12,SI No.4.1	Cum	5.74	5838.56	33,499	
3	Providing and laying in position reinforced cement concrete of design mix M25 with OPC cement @ 340kgs, with 20mm and down size graded granite metal coarse aggregates @ 0.70 cum and fine aggregates @ 0.47cum, with super plasticisers @ 3 liters conforming to IS 9103-1999 reafirmed-2008 at machine mixed, concrete laid in layers not exceeding 15 cms thick, vibrated for all works in foundation for footings, pedestrals, retaining walls, returnwalls, walls (any thickness) including attached pilasters, columnspillars, posts, struts, buttresses, bed blocks, anchor blocks & plinths etc including cost of all materials, labour, HOM of machinery, curing, complete but excluding cost of reinforcement as per specifications. KSRB Pg No.13,SI NO.4.10	Cum	18.60	6967.52	1,29,596	
4	Providing TMT steel reinforcement for R.C.C work including straightening, cutting, bending, hooking, placing in position, lapping and / or welding wherever required, tying with binding wire and anchoring to the adjoining members wherever necessary complete as per design (laps and wastage shall not be measured and paid) cost of materials, labour, HOM of machinery complete with all lead lifts and as per specifications and directinon of Engineer-in-Charge. FE 500 KSRB Pg No.17,SI No.4.46.2 Rev.	МТ	1.86	67879.84	1,26,257	
5	Providing and removing, centering, shuttering, strutting, propping etc., and removal of form work for foundations, footings, bases of columns for mass concrete including cost of all materials, labour complete as per specifications. KSRB Pg No.15,SI No.4.28	Sqm	31.50	258.72	8,150	
6	Providing and removing centering, shuttering, strutting, propping etc., and removal of form work for vertical surface such as walls at any thickness, including attached pilasters, buttresses plinth cills and string courses cost of all materials, labour complete as per specifications. KSRB Pg No.15,SI No.4.31	Sqm	216.00	328.16	70,883	
7	Providing and removing centering, shuttering, strutting, propping etc., and removal of form work for flat surface such as roofs, landings, balconies and likes, thickness upto 200mm including cost of all materials, labour complete as per specification. (Ground floor) KSRB,Pg No.15,SI No.4.18	Sqm	27.00	350.56	9,465	
8	KSRRB M2200 - Providing Weep holes Providing weep holes in Brick masonry / Plain / Reinforced concrete abutment, wing wall / return wall with PVC 90mm outer dia pipe 2 kg / Sqcm, extending through the full width of the structure with slope of 1V:20H towards drawing force complete as per drawing and Technical specifications complete as per specifications. KSRB,Pg No.225,SI No.28.10	Rmt	9.00	283.36	2,550	

BOQ item	Specification	Unit	Quantity Rate		Amount	Remarks	
9	Providing and laying of filter media with granular materials/stone crushed aggrigates satisfying the requirement laid down in clause 2500.4.2.2 of morth specification to a thickness not less than 600 mm with smaller size to wards the soil and bigger size towards the wall and provided over the entire surface behind the abutment,wing wall and return wall to full hight compacted to afirm condition complete as per drawing and technical specification KSRB,Pg No.225,SI No.28.13	Cum	2.43	1451.52	3,527		
10	KSRB 2.3: Filling available excavated earth (excluding rock) in sides of foundations upto plinth in layers not exceeding 20cms. In depth, compacting each deposited layer by ramming after watering with lead upto 50m. and lift upto 1.5m. including cost of all labour complete as per specifications. Specification No. KBS 2.9 KSRB Pg No.6,SI No.2.10	Cum	39.85	142.24	5,668		
	Total	12,33,457					
	Electrical Pole shifting cost		_	_	8,36,649		
	GRAND TOTAL	2,62,57,380					

Executive Engineer MSCL Mangaluru

GM Technical MSCL Mangaluru

MANGALURU SMART CITY
1.40 Measurement Sheet of UNDERGROUND DRAINAGE Zone 4 Part 2 and Zone 3 Part 1

	Electrical Estimates for Pole Shifting in Zone-4 and	Electrical Estimates for Pole Shifting in Zone-4 and Zone 3 Under ground drainage system at Mangaluru								
Item No	Particulars	Unit	No	L(m)	B(m)	D(m)	Qty	Rate (Rs)	Amount (Rs)	Remarks
11.2.1	Releasing and removal of 9 Mtr RCC pole and shifting to new location & re- erection of released 9 metre RCC pole in the location specified, including transportation to work site, digging a pit to a depth of 1.8 mtr, aligning it, refilling the old and new pits using soil removed up to ground level, compacting, complete for each pole, at an average span of maximum 40 metres including all lead and lifts, as per KPTCL/MESCOM/ IE rule & specifications	Nos					14	2920.30	40884.20	RA-1
11.2.2	Supply and erection of 9 metre RCC poles(using Tor50 12mm dia steel), including transportation to work site with all lead from factory and head load from the nearest road; digging a pit to a depth up to of 1.8 mtr, aligning it, refilling the soil removed up to ground level, compacting, complete for each pole, at a average span of 40 metres (max.) as per KPTCL/MESCOM/ IE rules including all lead and Lift.	Nos					10	7478.00	74780.00	RA-2
11.2.3	Releasing and removal of deteriorated / damaged 9 mtr RCC poles in 11 kV HT line, refilling of the pit up to ground level compacting etc., and handing over the unused damaged / deteriorated poles to MESCOM including all lead and lift.as per KPTCL/MESCOM/ IE rules.						10	1555.59	15555.89	RA-3
11.2.4	Releasing and removal of 11Mtr rail pole / ISMB poles, and shifting to new location & re-erection of released 11Mtr rail pole /ISMB poles including transportation to work site with all lead from factory and head load from the nearest road, in a pit of depth 1.8 mtrs, insertion of released pole in the new pit after coating with anti corrosive paint of black colour to a length of depth of insertion, aligning it, refilling the pit with soil removed, complete for each pole, at a average span of maximum 50metres Including all lead and lift, as per KPTCL/MESCOM/ IE rules and specifications.	Nos					1	2997.44	2997.44	RA-4
11.2.5	Supply and erection of 11 metre long Rail pole / ISMB -200 x 100mm size, transportation to work site with all lead from factory and head load from the nearest road; digging 1.8 Mtr pit, applying two coats of anti-corrosive paint to the root to a length of depth of insetion of black colour, aligning it, refilling the pit with soil removed up to ground level, compacting, complete for each pole, for a average span of maximum 50mtres as per KPTCL rules.(Including all lead and Lift).as per KPTCL/MESCOM/ IE rules.	Nos					0.5	17234.60	8617.30	RA-5
11.2.6	Pole base concreting : supplying and providing pole base concrete of size 500 x 650 x 150 mm using 1.4:8 ratio cement congrete for 9mtr RCC pole including shuttering & all other materials and labour all lead and lift as per KPTCL/MESCOM/ IE rules.						12	229.00	2748.00	RA-6
11.2.7	Pole base concretiong: supplying and providing pole base concrete of size 650 x 500 x 150 mm using 1:4:8 ratio cement congrete for 11 mtr ISMC / ISMB pole including shuttering & all other materials and labour all lead and lift as per KPTCL/MESCOM/ IE rules.						1	704.00	704.00	RA-7
11.2.8	Pole concreting: supplying and providing 1:2:4 ratio concrete mix of size 500 x 650 x 1700 mm cement concreting for 9 mtr RCC pole including all materials and labour, shuttering including all lead and lift as per KPTCL/MESCOM/ IE rules.	Foot					12	2566.00	30792.00	RA-8
11.2.9	Pole concretiong: supplying and providing 1:2:4 ratio concrete mix of size 500 x 2000 mm cement concreting for 11mtr ISMB pole concreting including all materials and labour, shuttering including all lead and lift as per KPTCL/MESCOM/ IE rules.						1	2721.00	2721.00	RA-9
11.2.10	Releasing and refixing of 11kV Horizontal cross arm with HT Single top support, clamps, bolts, nuts and washers including all lead and lift as per KPTCL/MESCOM/ IE rules.						14	272.75	3818.43	RA-10
11.2.11	Supplying and fixing of 11kV Horizontal cross arm with HT Single top support, including clamps, bolts, nuts and washers including all lead and lift and MESCOM specifications.	Oct					10	525.55	5255.50	RA-11
11.2.12	Releasing and removal of deteriorated damaged HT cross arms and handing over the released materials to MESCOM including all lead and lift as per KPTCL/MESCOM/ IE rules.						10	140.27	1402.73	RA-12
11.2.13	Releasing and refixing of released 4 pin LT Horizontal cross arms, fabricated out of mild steel structure steel as per KPTCL standards complete set with all fixing accessories like bolt, nuts, washers, pole clamps etc., including all necessary lead and lift as per KPTCL/MESCOM/ IE rules.						14	264.48	3702.72	RA-13
11.2.14	Supply and fixing of 4 pin LT horizontal cross arms, fabricated out of mild steel structure steel as per KPTCL standards complete set with all fixing accessories like bolt, nuts, washers, pole clamps etc., including all necessary lead and lift as per KPTCL/MESCOM/ IE rules.	Cat					10	402.20	4022.00	RA-14
11.2.15	Releasing ans removal of deteriorated / damaged 4 pin cross arms and handing over released cross arm to MESCOM including all lead and lift as per KPTCL/MESCOM/ IE rules.	Set					10	118.55	1185.52	RA-15
11.2.16	Releasing and refixing of released Guy sets with break insulators, 7 / 10 SWG GI wire, turn buckle and anchoring arrangements with necessary earth work excavation, providing and laying of concrete inclduing curing etc. complete as per KPTCL specification and rules including all lead and lifts as per KPTCL/MESCOM/ IE rules.	Set					2.5	1030.37	2575.93	RA-16
11.2.17	Supply and fixing of Guy sets with No. 15 break insulator, 7 / 10 SWG G I rope, turn buckle and anchoring arrangements with necessary earth work excavation, providing and laying of concrete inclduing curing etc. complete as per KPTCL specification and rules including all lead and lift as per KPTCL/MESCOM/ IE rules.	Set					2	1317.30	2634.60	RA-17
11.2.18	Releasing and restringing of released ACSR conductor and handing over the unused released materials to MESCOM including all lead and lift as per KPTCL/MESCOM/ IE rules.						5	7185.04	35925.20	RA-18
11.2.19	Supplying and stringing of Rabbit ACSR conductor, inclusive of length for jumps, binding to the Pin Insulators, with minimum sag of 5% with necessory lead and lifts as per IE Rules/ KPTCL /ESCOM specification.	Km					0	37457.60	0.00	RA-19
11.2.20	Releasing and restringing using released conductor for LT distribution line and returning the excess / unused materials to MESCOM including all lead and lift as per KPTCL/MESCOM/ IE Specifications.						6.5	5270.32	34257.05	RA-20

Item No	Particulars	Unit	No	L(m)	B(m)	D(m)	Qty	Rate (Rs)	Amount (Rs)	Remarks
11.2.21	Supplying and stringing of Weasel ACSR conductor for LT distribution as per MESCOM / KPTCL specifications and standards including all lead and lift.	Km					0.5	22873.85	11436.93	RA-21
11.2.22	Supplying and fixing of 11 KV Pin insulators with porcelien shell & GI pin including fixing hardwares like nut, plate and spring washers as per KPTCL/MESCOM standards and specifications including all lead and lift.	Nos					41.5	94.00	3901.00	RA-22
11.2.23	Supplying and fixing of 1.1 KV class pin insulator shell with GI pin including fixing hardwares like nut, plate and spring washers as per KPTCL standards and specifications including all lead and lift.						55	38.00	2090.00	RA-23
11.2.24	Supplying and fixing of No 8 strain/ LT Shackle insulators at the dead end / cut points of LT distribution line as per KPTCL /ESCOM specifications & standards including all lead and lift.	Nos					25	14.00	350.00	RA-24
11.2.25	Supplying and fixing of 11 kV, 45 kN Disc insulator at the dead end / cut points of HT line including fixing hardwares like nut, plate and spring washers as per KPTCL standards and specifications including all lead and lift.	Nos					28.5	290.00	8265.00	RA-25
11.2.26	Releasing and Refixing of released 11kv Pin insulator with GI pin and fixing hardwares like nut, plate and spring washers as per KPTCL standards and specifications including all lead and lift.						47	40.60	1908.20	RA-26
11.2.27	Releasing and Refixing of released 11kv, 45 kN Disc insulators at the dead end or cut point with necessory fixing hardwares like nut & bolts, plate and spring washers as per KPTCL / ESCOM specifications & standards including all lead and lift.	Non					28.5	49.30	1405.05	RA-27
11.2.28	Releasing and re-erection after transportation to the site of 11 kV DP structure kit, for the 11 kV DP made of 9mtr long, 145 kg WL RCC poles as per Drg No. SIC/DL/WSO 18/29-7-85 with accessories like clamps, bolt & Nuts plate and spring washers etc., including erectoin of poles after digging suitable pits & all lead and lift as per KPTCL/MESCOMspecifications.	Set					2	8959.26	17918.52	RA-28
11.2.29	Supply & erection, transportation to the site of 11 kV DP structure kit and 9 Mtr 145 kG WL RCC poles for making 11 kV DP as per Drg No. SIC/DL/WSO 18/29-7-85 with accessories like clamps, bolt & Nuts plate and spring washers etc., including erectoin of poles after digging suitable pits & all lead and lift as per KPTCL/MESCOMspecifications.	Set					1	20625.40	20625.40	RA-29
11.2.30	Releasing and removal of DP structure for mounting Transformer and handing over the released materials to MESCOM including all lead and lift.	Set					3	5928.93	17786.80	RA-30
11.2.31	Releasing and Re-errection of released 63 kVA Transformer along with associated equipment of the transformer centre as per Dgr NoKEB/SIC/WS/022/date :12.9.86 and handing over the unused released materials to MESCOM including all lead and lift.	Dor unit					1	28977.09	28977.09	RA-31.1
11.2.32	Releasing and Re-errection of released 63 kVA transformer in temperary location and shifting the same back to original loacation after completion of pipe line work along with associated equipment of the transfomer centre as per Dgr NoKEB/SIC / WS/022/date :12.9.86 and handing over the unused released materials to MESCOM including all lead and lift.	Per unit					0.5	57954.18	28977.09	RA-31.2
11.2.33	Releasing and Re-errection of released 100 kVA Transformer along with associated equipment of the transformer centre as per Dgr NoKEB/SIC/WS/022/date :12.9.86 and handing over the unused materials to MESCOM including all lead and lift.	Dan it					0.5	32175.65	16087.82	RA-32.1
11.2.34	Releasing and Re-errection of released 100 kVA transformer in temperary location and shifting the same back to original loacation after completion of pipe line work along with associated equipment of the transfomer centre as per Dgr NoKEB/SIC / WS/022/date :12.9.86 and handing over the unused released materials to MESCOM including all lead and lift.	Per unit					0.5	64351.29	32175.65	RA-32.2
11.2.35	Releasing and Re-errection of released 250 kVA Transformer along with associated equipment of the transformer centre as per Dgr NoKEB/SIC/WS/022/date :12.9.86 and handing over the unused materials to MESCOM including all lead and lift.	Por unit					0.5	30225.11	15112.55	RA-33.1
11.2.36	Releasing and Re-errection of released 250 kVA transformer in temperary location and shifting the same back to original loacation after completion of pipe line work along with associated equipment of the transfomer centre as per Dgr NoKEB/SIC / WS/022/date :12.9.86 and handing over the unused released materials to MESCOM including all lead and lift.	Per unit					0.5	60450.21	30225.11	RA-33.2
11.2.37	Releasing and Refixing of released 200A Single Break GOS with operating handle, tandom pipe etc., and returning the unused released materials to MESCOM including all lead and lift as per KPTCL/MESCOM specifications.						2.5	1752.18	4380.45	RA-34
11.2.38	Releasing and Refixing of released HG Fuse Unit and handing over the unused released materials to MESCOM including all lead and lift as per KPTCL/MESCOM specifications.						1	1165.37	1165.37	RA-35
11.2.39	Releasing and Refixing of released Lightning Arrestors and handing over the unused released materials to MESCOM including all lead and lift as per KPTCL/MESCOMspecifications.						1	195.61	195.61	RA-36
11.2.40	Releasing and Refixing of released LT Protection Kit and handing over the unused released materials to MESCOM including all lead and lift as per KPTCL/MESCOMspecifications.						1	1129.55	1129.55	RA-37
11.2.41	Releasing and Refixing of released L T Distribution Box and handing over the unused released materials to MESCOM including all lead and lift as per KPTCL/MESCOMspecifications.						1	1253.53	1253.53	RA-38
11.2.42	Releasing and refixing of released street light fitting on to shifted pole including wiring and testing the connection and proper function of the fitting including all lead and lift as per MESCOM /MCC specifications.						15.5	484.88	7515.64	RA-39
11.2.43	Releasing and reconnection of released House Service Connection,fixing PVC pipe for taking the leads from the conductor to the pole fuse board or line conductor (including taking the lead wire inside the pvc pipe & giving connection to the overhead line & pole fuse box/ fuse board including all lead and lift as per MESCOM specifications.	Set					23.5	360.91	8481.27	RA-40
11.2.44	Supplying and fixing 2.5m long 2.9 mm thick 40mm dia GI pipe earth electrode for DP structures, including excavation of pit, necessary salt and charcoal, construction of masonary chamber with cover complete as specified in IS 3043 and drawing including running of 7/10SWG GI wire for connection with all lead and lift as per KPTCL/MESCOMspecifications.	Set					8	2057.85	16462.80	RA-41

Item No	Particulars	Unit	No	L(m)	B(m)	D(m)	Qty	Rate (Rs)	Amount (Rs)	Remarks
11.2.45	Releasing and restringing of released 1.1kv grade aerial bunched 5 core (3 x 95 sq mm for phase and 1 x 70 sq mm neutral and 1 x 16 sq mm street light cable, XLPE insulated stranded aluminium conductor, layed around a weather resistant black XLPE insulated AAA Messenger wire on shifted poles including all lead and lift as MESCOM/MCC specifications.	Km					0.5	56273.63	28136.82	RA-42
11.2.46	Releasing and refixing of released guarding materials for HT & LT and P & T lines and Road Crossings etc., on shifted line complete with all necessary accessories including all lead and lifts as per IE/KPTCL Rules & Specifications.	Set					2	2917.55	5835.09	RA-43
11.2.47	Supplying and fixing of guarding for HT & LT lines, P & T lines and Road Crossings etc., complete with all necessary accessories including all lead and lift as per IE/KPTCL Rules & Specifications.						1	4935.55	4935.55	RA-44
11.2.48	Releasing and relaying of released 2.5 to 25sqmm size L T Under ground cable for house service connection including termination and testing for proper function including all lead and lift as per KPTCL/MESCOM/ IE rules.						0.5	35192.37	17596.19	RA-45
11.2.49	Supplying and fixing straight through jointing kit suitable for 1.1kv class LT UG cable of size 4C x 10 sq mm and 4C x 16 sq mm including all lead and lift as per MESCOM Norms.	Kit					15.5	1327.00	20568.50	RA-46.1
11.2.50	Supplying and fixing straight through jointing kit suitable for 1.1kv class LT UG cable of size $3.5 \text{C} \times 25 \text{ sq mm} \& 3.5 \text{C} \times 35 \text{ sq mm}$ including all lead and lift as per MESCOM Norms.	Kit					8.00	1604.00	12832.00	RA-46.2
11.2.51	Providing at site, inclusive of all lead and lift, brand new approved make alluminium conductor PVC insulated, sheathed, steel wire armoured UG cable with PVC outer sheathing 1.1 KV class UG cable confirming to IS: 1554(P-1) - 2C X 10 SQ MM Aluminiumn cable	Km					0.0	72856.30	0.00	RA-47.1
11.2.52	Providing at site, inclusive of all lead and lift, brand new approved make alluminium conductor PVC insulated, sheathed, steel wire armoured UG cable with PVC outer sheathing of 1.1 KV class UG cable confirming to IS: 1554(P-1)-4C X 10 SQ MM Aluminiumn cable.	Km					0	90073.30	0.00	RA-47.2
11.2.53	Providing at site, inclusive of all lead and lift, brand new approved make alluminium conductor PVC insulated, sheathed, steel wire armoured UG cable with PVC outer sheathing 1.1 KV class UG cable confirming to IS: 1554(P-1) - 2C X 16 SQ MM Aluminiumn cable						0	75478.30	0.00	RA-47.3
11.2.54	Providing at site, inclusive of all lead and lift, brand new approved make alluminium conductor PVC insulated, sheathed, steel wire armoured UG cable with PVC outer sheathing of 1.1 KV class UG cable confirming to IS: 1554(P-1)-4C X 16 SQ MM Aluminiumn cable.	Km					0	109051.30	0.00	RA-47.4
11.2.55	Providing at site, inclusive of all lead and lift, brand new approved make alluminium conductor PVC insulated, sheathed, steel wire armoured UG cable with PVC outer sheathing of 1.1 KV class UG cable confirming to IS: 1554(P-1)-4C X 25 SQ MM Aluminiumn cable.	Km					0	128300.30	0.00	RA-47.5
11.2.56	Releasing and relaying the existing GI/PVC pipe for house service connection including all lead and lift as per MESCOM Norms.	Mtr					312	123.98	38680.20	RA-48
11.2.57	Supplying and laying of Class A, 40mm dia., GI pipe on pole /wall/drain crossing with necessary clamping arrangements for UG cable of 1.1KV class.	Mtr					18.5	345.00	6382.50	RA-49.1
11.2.58	Digging of trench of 0.6m deep x 0.5 m wide trench and refilling the same to the required ground level and consolidating etc., including all lead and lift, as per ESCOM specifications.						156	78.00	12168.00	RA-50
11.2.59	Providing and filling of river sand all around UG cable to a depth of 150 mm all around, laid in excavated trench as per ESCOM / KPTCL specifications	Mtr					156	103.00	16068.00	RA-51
11.2.60	Temporary Shifting of HT/LT lines: Shifting of electrical poles along with HT/LT cross arms to temporary location and reshifting to original position after completion of work including all lead and lift as per the instructions of KPTCL /MESCOM Authority.						3	10774.63	32323.89	RA-52
11.2.61	Releasing and re-erection of released 8 mtr long strut pole including calmps digging pit, concreting with all accessories at the new alignment of O H line.	Nos					3	2336.24	7008.72	RA-53
11.2.62	Realeasing and re-erection of three pole structure using 9 mtr long, 145 kg WL, RCC poles and structural materials in proposed location complete set including all stanadrd accessories & including all lead and lift as per MESCOM specifications /estimate.						0.5	13414.68	6707.34	RA-54
	Total								761649.00	· · · · · · · · · · · · · · · · · · ·
	KPTCL/ESCOM registration cum processing fee,Issue of NOC, Initial security deposits, Meter security deposits, supervision, inspection charges,etc Including liaison with power supply authorities, electrical inspectorate, transmission of relevant documents, arranging for power supply,pollution control board acceptances for Genset installation and other charges including generator	Job					0.5	150000.00	75000.00	
	installation also.								020040.00	
	Grand Total								836649.00	

Assistant Engineer Executive Engineer GM Technical MSCL Mangaluru MSCL Mangaluru MSCL Mangaluru

MANGALURU SMART CITY 1.30 Measurement Sheet of UNDERGROUND DRAINAGE Zone-3 (Part -2)

Sr.No.	Description of Work	UNIT	No	LENGTH	BREADTH	DEPTH	QUANTITY
1	KSRRB200-8. Clearing and grubbing road land including uprooting rank vegetation, grass, brush, shrubs, saplings and trees of girth upto 300mm, by manual means, in area of light jungle, removal of stumps, disposal of unserviceable materials, stacking of serviceable materials labour charges complete as per specifications						
	KSRB Pg No.136,SI No.18.11						
	Zone 3 Part 2	Sqm	1				5971.77
	Total	Sqm				Total	5972.00
2	Cutting asphalt road surface for pipeline trenches and disposing off the excavated stuff with all lead and lift as directed including barricading,danger lighting etc., KUWSDB-15-16 SI No.5.2,Pg No.17						
	Zone- 3 (Part- 2)						
	Only for Pipe portion trench PM Rao Road						
	MH 1157 to O44	Cum	1	169.00	1.20	0.2	40.56
	Sharavu Ganapati Temple Road and Car Street Cross Road	Cuiii		103.00	1.20	0.2	40.50
	MH 2506 to MH 1725	Cum	1	417.60	2.10	0.2	175.39
	Sharavu Ganapati Temple cross Road						
	MH 567 to MH 1932	Cum	1	48.30	1.20	0.2	11.59
	Car Street and Cross Road				-		-
	MH1719 to MH O-27	Cum	1	478.00	2.10	0.2	200.76
	Carstreet Road	_					
	MH 1231 to O 56	Cum	1	100.50	1.20	0.2	24.12
	VT Road			400.00	2.40		206 72
	MH 1300 to O 53 ASR Pai Road	Cum	1	492.20	2.10	0.2	206.72
	MH 1513 to O 61	Cum	1	196.70	1.20	0.2	47.21
	Car street Road	Cuiii	1	190.70	1.20	0.2	47.21
	MH 1528 to O26	Cum	1	133.20	1.20	0.2	31.97
	KSR Cross Road						
	MH 1673 to MH 1529	Cum	1	219.80	1.20	0.2	52.75
	Kudroli Road						
	MH 1657 to O 32	Cum	1	100.70	1.20	0.2	24.17
	Zone- 3 (Part- 2)						
	Only for Manhole portion						
	PM Rao Road						
	MH 1157 to O44	Cum	6	2.00	2.00	0.2	4.80
	Sharavu Ganapati Temple Road and Car Street Cross Road						
	MH 2506 to MH 1725	Cum	18	2.00	2.00	0.2	14.40
	Sharavu Ganapati Temple cross Road						
	MH 567 to MH 1932	Cum	2	2.00	2.00	0.2	1.60
	Car Street and Cross Road			2.00	2.22		46.00
	MH1719 to MH O-27	Cum	20	2.00	2.00	0.2	16.00
	Carstreet Road MH 1231 to O 56	Cum	4	2.00	2.00	0.2	3.20
	VT Road	Cuiii	7	2.00	2.00	0.2	3.20
	MH 1300 to O 53	Cum	20	2.00	2.00	0.2	16.00
	ASR Pai Road						
	MH 1513 to O 61	Cum	7	2.00	2.00	0.2	5.60
	Car street Road				-	-	-
	MH 1528 to O26	Cum	6	2.00	2.00	0.2	4.80
	KSR Cross Road						_
	MH 1673 to MH 1529	Cum	8	2.00	2.00	0.2	6.40
	Kudroli Road	C	4	2.00	2.00	0.0	2.20
	MH 1657 to O 32	Cum	4	2.00	2.00	0.2	3.20
	For Household Connection- Zone 3 Part 2 (MH = 110 Nos, L=5m X 4 connections in each manhole) -Road width >3m and 50% of length	Cum	110	10.00	0.60	0.2	132.00
	For Household Connection- Zone 3 Part 2 (MH = 1 Nos, L=5m X 4 connections in each manhole) - Road width<3m and 50% of length	Cum	1	10.00	0.60	0.2	1.20
	Tatal 000% of Occupation for Applicable Decil	Cum				Total	1024.44
	Total 90% of Quantity for Asphalt Road	Cum				Total	922.00

Sr.No.	Description of Work	UNIT	No	LENGTH	BREADTH	DEPTH	QUANTITY
_	Cutting Concrete road surface for pipeline trenches and disposing off the excavated stuff with all lead and lift as directed including						
3	barricading,danger lighting etc., KUWSDB-15-16 SI No.5.3,Pg No.17						
	Total quantity for Zone 3 Part 2	Cum					1024.44
	Total 10% of Quantity for Concrete Road	Cum					102.44
	Taking out existing CC interlocking paver blocks from footpath/ central						
	verge, including removal of rubbish etc., disposal of unserviceable						
4	material to the dumping ground, for which payment shall be made						
	separately and stacking of serviceable material within 50 metre lead as						
	per direction of Engineer-in-Charge.(As per Data Rate)						
	Zone- 3 (Part- 2)						
	Only for Pipe portion trench						
	Car Street Cross Road		_				
	MH 569 to O 26	Sqm	1	47.20	1.20		56.64
	For Manhole Area						
	Car Street Cross Road						
	MH 569 to O 26	Sqm	2	2.00	2.00		8.00
		94		2.00	2.00		0.00
	Household Connection						
	Zone 3 Part 2	1					
	For Household Connection- Zone 3 Part 1 (MH = 11Nos, L=5m X 4 connections in each manhole)-Road Width >3m and 50% of length	Sqm	11	10.00	0.60		66.00
	For Household Connection- Zone 3 Part 1 (MH = 4Nos, L=5m X 4 connections in each manhole)-Road width <3m and 50% of length	Sqm	4	10.00	0.60		24.00
	connections in each mannole,-koad width <5111 and 50% of length	Sam				Total	154.64
		Sqm				iotai	134.04
	Earthwork excavation for pipeline trenches (Except building work)						
	including barricading depositing on bank with all lead including danger						
5	lighting and using sight rails and boning rods including						
	shoring, strutting, bailing out water at every 100 meters wherever						
	neccessary as directed in the following Strata						
	KUWSDB SR 15-16,SI No 1,Pg No 5						
i)	do in all soils mixed mixed with boulders of 30 cms size upto an exclusive of disintegrated rock D182						
Α	Zone- 3 (Part- 2)						
a	0 to 2 mtr Depth						
	PM Rao Road						
	MH 1157 to O44	Cum	1	169.00	0.80	1.39	187.48
	Sharavu Ganapati Temple Road and Car Street Cross Road						
	MH 2506 to MH 1725	Cum	1	417.60	1.40	1.74	1019.25
	Sharavu Ganapati Temple cross Road			40.00	0.00		60.47
	MH 567 to MH 1932	Cum	1	48.30	0.80	1.64	63.47
	Car Street and Cross Road MH1719 to MH O-27	Cum	1	478.00	1.40	1.92	1282.69
	Carstreet Road	Cuili	1	478.00	1.40	1.52	1202.03
	MH 1231 to O 56	Cum	1	100.50	0.80	1.40	112.46
	VT Road						
	MH 1300 to O 53	Cum	1	492.20	1.40	1.84	1266.11
	ASR Pai Road						
	MH 1513 to O 61	Cum	1	196.70	0.80	1.35	212.89
	Car street Road	C	4	422.22	0.00	4.50	465.00
	MH 1528 to O26 Car Street Cross Road	Cum	1	133.20	0.80	1.56	165.88
	Car Street Cross Road MH 569 to O 26	Cum	1	47.20	0.80	1.59	59.85
	KSR Cross Road	Cuili		47.20	0.60	1.39	33.03
	MH 1673 to MH 1529	Cum	1	219.80	0.80	1.54	270.02
	Kudroli Road				,,,,,		
	MH 1657 to O 32	Cum	1	100.70	0.80	1.65	132.82
	7 (2/2 (2)	Cum				Total	4772.92
В	Zone- 3 (Part- 2)						
a	0 to 2 mtr Depth (Manhole) PM Rao Road						
	MH 1157 to O44	Cum	6	2.00	2.00	1.64	39.28
	Sharavu Ganapati Temple Road and Car Street Cross Road	Cuili		2.00	2.00	1.04	33.28
	MH 2506 to MH 1725	Cum	18	2.00	2.00	1.83	131.42
	Sharavu Ganapati Temple cross Road						
	MH 567 to MH 1932	Cum	2	2.00	2.00	1.78	14.26
	Car Street and Cross Road						

Sr.No.	Description of Work	UNIT	No	LENGTH	BREADTH	DEPTH	QUANTITY
	MH1719 to MH O-27	Cum	20	2.00	2.00	1.93	154.04
	Carstreet Road						
	MH 1231 to O 56	Cum	4	2.00	2.00	1.65	26.38
	VT Road						
	MH 1300 to O 53	Cum	20	2.00	2.00	1.92	153.26
	ASR Pai Road						
	MH 1513 to O 61	Cum	7	2.00	2.00	1.60	44.88
	Car street Road						
	MH 1528 to O26	Cum	6	2.00	2.00	1.73	41.62
	Car Street Cross Road						
	MH 569 to O 26	Cum	2	2.00	2.00	1.75	13.96
	KSR Cross Road						
	MH 1673 to MH 1529	Cum	8	2.00	2.00	1.72	55.04
	Kudroli Road						
	MH 1657 to O 32	Cum	4	2.00	2.00	1.79	28.70
		Cum				Total	702.84
	For Household Connection- Zone 3 Part 2 (MH = 121 Nos, L=5m X 4	Cum	121	20.00	0.60	0.9	1306.80
	connections in each manhole) Road width >3m	Culli	121	20.00	0.60	0.9	1300.60
	For Household Connection- Zone 3 Part 2 (MH =5 Nos, L=5m X 4	Cum	5	20.00	0.60	0.9	54.00
	connections in each manhole) - Road width <3m	Culli	ה	20.00	0.60	0.9	34.00
	Total Qty	Cum					6836.55
	Total Trench Line Qty	Cum					6133.72
	Total 80% of Qty above trench line Qty	Cum					4906.98
	70% Manual Qty	Cum					3434.88
5	Earthwork excavation for pipeline trenches (Except building work) including barricading depositing on bank with all lead including danger lighting and using sight rails and boning rods including shoring, strutting, bailing out water at every 100 meters wherever						
	neccessary as directed in the following Strata KUWSDB SR 15-16,SI No ii,Pg No 5						
ii)	do in all soils mixed mixed with boulders of 30 cms size upto an						
"")	exclusive of disintegrated rock D182						
Α	Zone- 3 (Part- 2)						
a	2 to 4 mtr Depth (for 0.80m Width)						
	Sharavu Ganapati Temple Road and Car Street Cross Road						
	MH 2506 to MH 1725	Cum	1	417.60	0.80	0.15	48.44
	Car Street and Cross Road						
	MH1719 to MH O-27	Cum	1	478.00	0.80	0.95	361.66
	VT Road						
	MH 1300 to O 53	Cum	1	492.20	0.80	0.70	274.54
<u> </u>		Cum				Total	684.64
В	Zone- 3 (Part- 2)						
а	2 to 4 mtr Depth (Manhole)						
	Sharavu Ganapati Temple Road and Car Street Cross Road					_	
	MH 2506 to MH 1725	Cum	18	2.00	2.00	0.11	8.16
	Car Street and Cross Road						
	MH1719 to MH O-27	Cum	20	2.00	2.00	1.05	84.32
	VT Road	<u> </u>					
	MH 1300 to 0 53	Cum	20	2.00	2.00	0.72	57.60
	Car street Road	<u> </u>					
	MH 1528 to O26	Cum	6	2.00	2.00	0.04	0.96
		Cum				Total	151.04
	T. (-1	Cum				Total	835.68
	Total Trench Line Qty	 _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ 					684.64
	30% of Total Qty	Cum					205.39
	70% Manual Qty	Cum					143.77

Sr.No.	Description of Work	UNIT	No	LENGTH	BREADTH	DEPTH	QUANTITY
	Earthwork excavation for pipeline trenches (Except building work)						
	including barricading depositing on bank with all lead including danger						
	lighting and using sight rails and boning rods including						
6	shoring, strutting, bailing out water at every 100 meters wherever						
	neccessary as directed in the following Strata						
	KUWSDB SR 15-16,Sl No 1-ii-(a),Pg No 5						
ii	In disintegrated rock, soft rock, soft shale, medium hard rock						
"	comprising of lime stone, sand stone, hard shale, schiest, fissured						
	rock without resorting to blasting 0 to 2.0m Depth						
а		Cum	1				6133.72
	Total Trench line Qty Total 10% Quantity	Cum					
		Cum					613.37
	70% Manual Qty	Cum					429.36
-	2 O to 4 One Double						
b	2.0 to 4.0m Depth						
	Total Trench line Qty	Cum	1				684.64
	Total 20% Quantity	Cum					136.93
	70% Manual Qty	Cum					95.85
	Earthwork excavation for pipeline trenches (Except building work)						
	including barricading depositing on bank with all lead including danger						
7	lighting and using sight rails and boning rods including						
,	shoring, strutting, bailing out water at every 100 meters wherever						
	neccessary as directed in the following Strata						
	KUWSDB SR 15-16,Sl No 1-iii-(a),Pg No 7						
	In hard laterite rock or hard laterite rock containing iron ore upto 20%						
iii	by chistelling and trimming to proper slope						
	0 to 2.0m Depth						
	Total Trench line Qty	Cum	1				6133.72
	Total 5% Quantity	Cum					306.69
b	2.0 to 4.0m Depth						
~	Total Trench line Qty	Cum	1				684.64
	Total 10% Quantity	Cum					68.46
	Earthwork excavation for pipeline trenches (Except building work)						
	including barricading depositing on bank with all lead including danger						
	lighting and using sight rails and boning rods including						
8	shoring,strutting,bailing out water at every 100 meters wherever						
	neccessary as directed in the following Strata						
	KUWSDB SR 15-16,SI No 1-iv-(a),Pg No 7						
	In hard laterite rock containing iron ore above 20% by chistelling and						
	trimming to proper slope						
a	0 to 2.0m Depth	_	_				
	Total Trench line Qty	Cum	1				6133.72
	Total 2% Quantity	Cum					122.67
	70% Manual Qty	Cum					85.87
b	2.0 to 4.0m Depth						
	Total Trench line Qty	Cum	1				684.64
	Total 10% Quantity	Cum					68.46
	70% Manual Qty	Cum					47.92
	Earthwork excavation for pipeline trenches (Except building work)						
	including barricading depositing on bank with all lead including danger						
_	lighting and using sight rails and boning rods including						
9	shoring, strutting, bailing out water at every 100 meters wherever						
	neccessary as directed in the following Strata						
	KUWSDB SR 15-16,SI No 1-vi-(a),Pg No 9						
	In hard rock by Controlled blasting			†			
	0 to 2.0m Depth			1			
а			1				6133.72
a					1		0133.72
а	Total Trench line Qty	Cum					122 67
a		Cum					122.67
	Total Trench line Qty Total 2% Quantity						122.67
a b	Total Trench line Qty Total 2% Quantity 2.0 to 4.0m Depth	Cum					
	Total Trench line Qty Total 2% Quantity		1				684.64 136.93

Sr.No.	Description of Work	UNIT	No	LENGTH	BREADTH	DEPTH	QUANTITY
10	Earthwork excavation for pipeline trenches (Except building work) including barricading depositing on bank with all lead including danger lighting and using sight rails and boning rods including shoring, strutting, bailing out water at every 100 meters wherever neccessary as directed in the following Strata						
	KUWSDB SR 15-16,SI No 1-v-(a),Pg No 7						
a	In hard rock by chistelling 0 to 2.0m Depth						
	Total Trench line Qty	Cum	1				6133.72
	Total 1% Quantity	Cum					61.34
b	2.0 to 4.0m Depth						
	Total Trench line Qty	Cum	1				684.64
	Total 10% Quantity	Cum					68.46
11	Earthwork Excavation by Mechanical Means Earthwork in excavation for pipeline trenches beyond 600mm and 1500mm trench width as per drawing and technical specification, including setting out, construction of shoring, strutting, barricading, danger lighting, bracing, using sight rails and boning rods at every 100 meters wherever neccessary as directed, removal of slumps and other deleterious matter, dressing of						
	sides and levelling the bottom of trench to the extent required, utilising the available excavated earth locally for the work etc., complete in the following strata. KUWSDB SR 15-16.Sl No Vii 3.Pg No 11						
i)	a) - do - In ordinary/All soils/Hard soil	4					F442.27
	Total Qty Total 30% of Quantity	1 Cum			Total		5112.37 1533.71
ii)	b) -do- In Ordinary Rock (not requiring blasting)						
	Total Trench line Quantity	1					1446.39
iii)	Total 30% of Quantity c) -do- In Hard Rock (requiring blasting)	Cum			Total		433.92
,	Total Trench line Quantity	1					259.60
	Total 30% of Quantity	Cum			Total		77.88
12	Providing course sand bedding for the pipeline trenches including watering and consolidation by punners etc.,complete with all lead and lift (In black cotton and rock reaches) KUWSDB 15-16,Pg No 17,Sl No.6						
Α	Zone- 3 (Part- 2) Vol of sand Boxing						
	PM Rao Road						
	MH 1157 to O44	Cum	1	169.00	0.80	0.15	20.28
	Sharavu Ganapati Temple Road and Car Street Cross Road MH 2506 to MH 1725	Cum	1	417.60	0.80	0.15	50.11
	Sharavu Ganapati Temple cross Road	Cum		417.00	0.80	0.13	30.11
	MH 567 to MH 1932	Cum	1	48.30	0.80	0.15	5.80
	Car Street and Cross Road MH1719 to MH O-27	Cum	1	478.00	0.80	0.15	57.36
	Carstreet Road	Cum	-	470.00	0.00	0.13	37.30
	MH 1231 to O 56	Cum	1	100.50	0.80	0.15	12.06
	VT Road MH 1300 to O 53	Cum	1	492.20	0.80	0.15	59.06
	ASR Pai Road		-	.52.20	0.00	0.13	33.00
	MH 1513 to O 61	Cum	1	196.70	0.80	0.15	23.60
	Car street Road MH 1528 to O26	Cum	1	133.20	0.80	0.15	15.98
	Car Street Cross Road		-	100.20	0.00	0.13	20.50
	MH 569 to O 26	Cum	1	47.20	0.80	0.15	5.66
	KSR Cross Road MH 1673 to MH 1529	Cum	1	219.80	0.80	0.15	26.38
	Kudroli Road						
	MH 1657 to O 32	Cum	1	100.70	0.80	0.15	12.08
	For Household Connection- Zone 3 Part 2 (MH = 121 Nos, L=5m X 4 connections in each manhole) Road width >3m	Cum	121	20.00	0.60	0.15	217.80
	For Household Connection- Zone 3 Part 2 (MH =5 Nos, L=5m X 4	C	-	20.00	0.60	0.15	9.00
	connections in each manhole) - Road width <3m	Cum	5	20.00	0.00	0.13	3.00

Sharawu Ganapasti Temple Road and Car Street Cross Road	Sr.No.	Description of Work	UNIT	No	LENGTH	BREADTH	DEPTH	QUANTITY
Zone - 3 (Part - 2) For Pipe line (200mm dia pipe)	В	Pipe Deduction				Area (r	oi*r*r)	
MR Rao Road		Zone- 3 (Part- 2)				,,		
Mil 1157 to OAB Sharaw Ganapati Temple Road and Car Street Cross Road Sharaw Ganapati Temple Road and Car Street Cross Road Sharaw Ganapati Temple Road and Car Street Cross Road Sharaw Ganapati Temple Road and Car Street Cross Road Sharaw Ganapati Temple Road and Car Street Cross Road Sharaw Ganapati Temple Road and Car Street Cross Road Sharaw Ganapati Temple Road and Car Street Cross Road Sharaw Ganapati Temple Road and Car Street Cross Road Sharaw Ganapati Temple Road and Car Street Cross Road Sharaw Ganapati Temple Road and Car Street Cross Road Sharaw Ganapati Temple Road and Car Street Cross Road Sharaw Ganapati Temple Road and Car Street Cross Road Sharaw Ganapati Temple Road and Car Street Cross Road Sharaw Ganapati Temple Road and Car Street Cross Road Sharaw Ganapati Temple Road and Car Street Cross Road Sharaw Ganapati Temple Road and Car Street Cross Road Sharaw Ganapati Temple Road and Car Street Cross Road Sharaw Ganapati Temple Cross R		For Pipe line (200mm dia pipe)						
Sharawu Ganapasti Temple Road and Car Street Cross Road		PM Rao Road						
Mil 2506 to Mil 1725		MH 1157 to O44	Cum	-1	169.00	0.0	31	-5.31
Sharawu Ganapati Temple cross Road		Sharavu Ganapati Temple Road and Car Street Cross Road						
MM H 567 to MM H 1932		MH 2506 to MH 1725	Cum	-1	417.60	0.0	31	-13.11
Car Street and Cross Road		Sharavu Ganapati Temple cross Road						
MM1719 to MH 0-27		MH 567 to MH 1932	Cum	-1	48.30	0.0	31	-1.52
Carstreet Road		Car Street and Cross Road						
MH 1231 to 0 56 VT Road MH 1300 to 0 53 ASR Pair Road MH 1531 to 0 61 Cum -1 196.70 0.031 -15.46 ASR Pair Road MH 1531 to 0 61 Cum -1 196.70 0.031 -6.18 Car street Road MH 1531 to 0 61 Cum -1 196.70 0.031 -6.18 Car Street Road MH 1532 to 026 Cum -1 133.20 0.031 -4.18 KSR Cross Road MH 1573 to MH 1529 Cum -1 100.70 0.031 -6.90 Cum -1 100.70 0.031 -6.90 Cum -1 100.70 0.031 -3.16 For Household Connection- Zone 3 Part 2 (MH = 121 Nos, L=5m X 4 connections in each manhole) Road width ≺3m For Household Connection- Zone 3 Part 2 (MH = 5 Nos, L=5m X 4 connections in each manhole) - Road width ≺3m For Household Connection- Zone 3 Part 2 (MH = 5 Nos, L=5m X 4 connections in each manhole) - Road width ≺3m For Household Connection- Zone 3 Part 2 (MH = 5 Nos, L=5m X 4 connections in each manhole) - Road width ≺3m For Household Connection- Zone 3 Part 2 (MH = 5 Nos, L=5m X 4 connections in each manhole) - Road width ≺3m For Household Connection- Zone 3 Part 2 (MH = 5 Nos, L=5m X 4 connections in each manhole) - Road width ≺3m For Household Connection- Zone 3 Part 2 (MH = 5 Nos, L=5m X 4 connections in each manhole) - Road width ≺3m For Household Connection- Zone 3 Part 2 (MH = 5 Nos, L=5m X 4 connections in each manhole) - Road width ≺3m For Household Connection- Zone 3 Part 2 (MH = 5 Nos, L=5m X 4 connections in each manhole) - Road width ≺3m For Household Connection- Zone 3 Part 2 (MH = 5 Nos, L=5m X 4 connections in each manhole) - Road width ≺3m For Household Connection- Zone 3 Part 2 (MH = 5 Nos, L=5m X 4 connections in each manhole) - Road width ≺3m For Household Connection- Zone 3 Part 2 (MH = 5 Nos, L=5m X 4 connections in each manhole) - Road width ≺3m For Household Connection- Zone 3 Part 2 (MH = 5 Nos, L=5m X 4 connections in each manhole) - Road width ≺3m For Household Connection- Zone 3 Part 2 (MH = 5 Nos, L=5m X 4 connections in each manhole) - Road width ≺3m For Household Connection- Zone 3 Part 2 (MH = 5 Nos, L=5m X 4 connections in each manhole) - Road width ≺3m For Househ		MH1719 to MH O-27	Cum	-1	478.00	0.0	31	-15.01
MH 1300 to 0 53 MH 1300 to 0 53 MH 1513 to 0 61 Car street Road MH 1513 to 0 61 Car Street Road MH 1528 to 026 Car Street Road MH 1528 to 026 Car Street Road MH 1529 Car Street Road MH 1521 to 0 125 For Household Connection- Zone 3 Part 2 (MH = 121 Nos, L=5m X 4 connections in each manhole) Road width -3m Total Ded Total Ded Total Sand Qty for pipe line trench Car Street Road MH 1571 to 0 44 Sharawa Ganapati Temple Road and Car Street Cross Road MH 1571 to 0 44 MH 1571 to 0 56 MH 1529 Cum Cum Cum Cum Cum Cum Cum Cu		Carstreet Road						
MH 1300 to 0 53 ASR Pai Road MH 1513 to 0 61 Car street Road MH 1513 to 0 61 Car Street Road MH 1528 to 0 26 Car Street Cross Road MH 1563 to 0 126 KSR Cross Road MH 1567 to 0 22 For Household Connection- Zone 3 Part 2 (MH = 121 Nos, L=5m X 4 connections in each manhole) - Road width - 3m For Household Connection- Zone 3 Part 2 (MH = 5 Nos, L=5m X 4 Total Ded Total Ded Total Ded MH 157 to 0 45 Sharavu Ganapati Temple Road and Car Street Cross Road MH 157 to 0 45 Sharavu Ganapati Temple Road and Car Street Cross Road MH 157 to 0 44 MH 157 to MH 1525 Cum MH 157 to MH 1525 Cum MH 157 to 0 45 Sharavu Ganapati Temple Road and Car Street Cross Road MH 157 to MH 157 MH 157 to MH 1525 Cum MH 157 to MH 1526 Cum MH 157 to MH 1526 Cum MH 157 to MH 1527 Cum MH 157 to MH 1527 Cum MH 157 to MH 1527 Cum MH 157 to MH 1528 Cum MH 157 to MH 1529 Cum MH 157 to MH 1520 Cum MH 157 to MH 1525 Cum MH 157 to MH 1580 Cum MH 157 to MH 1580 Cum MH 157 to MH 1580 Cum MH 157 to O 2.00 MH 157 to O 2.00 MH 157 to O 32 Cum MH 157 to O 2.00 MH 157 to O 2.00 MH 157 to O 32 Cum MH 157 to O 2.00 MH 157 to O 32 Cum MH 157 to O 2.00 MH 157 to O 32 MH 157 to O 32 Cum MH 157 to O		MH 1231 to O 56	Cum	-1	100.50	0.0	31	-3.16
ASR Pal Road MH 1513 to 0 61 Car Street Road MH 1528 to 026 Car Street Cross Road MH 1529 MH 1575 to 0 32 MH 1673 to MH 1529 Cum -1 100.70 0.031 -4.18 Cum -1 170.70 0.031 -4.18 Cum -1 170.70 0.031 -4.18 MH 1673 to MH 1529 Cum -1 100.70 0.031 -4.88 Cu		VT Road						
MH 1513 to 0 61 Car street Road MH 1528 to 0 26 Car Street Cross Road MH 1537 to 0 87 MH 1529 MH 1529 MH 1529 MH 1527 to 0 87 For Household Connection- Zone 3 Part 2 (MH = 121 Nos, L=5m X 4 connections in each manhole) - Road width - 3m For Household Connection- Zone 3 Part 2 (MH = 121 Nos, L=5m X 4 connections in each manhole) - Road width - 3m Total Ded Total Sand Cty for pipe line trench Car Street And Connection- Zone 3 Part 2 (MH = 121 Nos, L=5m X 4 connections in each manhole) - Road width - 3m For Mousehold Connection- Zone 3 Part 2 (MH = Nos, L=5m X 4 connections in each manhole) - Road width - 3m For Mousehold Connection- Zone 3 Part 2 (MH = Nos, L=5m X 4 connections in each manhole) - Road width - 3m For Manhole side C Zone- 3 (Part- 2) PM Roa Road MH 157 to 044 MH 157 to 044 MH 157 to 044 MH 157 to 044 MH 1596 to MH 1725 Sharavu Ganapati Temple Road and Car Street Cross Road MH 1596 to MH 1725 MH 1597 to MH 1932 Car Street and Cross Road MH 1510 to MH 1932 Car Street and Cross Road MH 1511 to 0 56 VT Road MH 1513 to 0 56 Cum 4 2 2.00 2.00 1.65 26.38 MH 1531 to 0 56 Cum 6 2.00 2.00 1.77 42.55 Car Street Road MH 1513 to 0 61 Car Street Road MH 1513 to 0 65 Cum 6 2.00 2.00 1.77 42.55 Car Street Road MH 1513 to 0 61 Cum 7 2.00 2.00 1.77 42.55 Car Street Road MH 1513 to 0 61 Cum 8 2.00 2.00 1.77 42.55 Car Street Road MH 1513 to 0 63 Cum 8 2.00 2.00 1.77 42.55 Car Street Road MH 1513 to 0 61 Cum 8 2.00 2.00 1.77 42.55		MH 1300 to O 53	Cum	-1	492.20	0.0	31	-15.46
Car street Road		ASR Pai Road						
MH 1528 to 0.26		MH 1513 to O 61	Cum	-1	196.70	0.0	31	-6.18
Car Street Cross Road		Car street Road						
MH 569 to O 26 KSR Cross Road MH 1673 to MH 1529 Cum 1 1 219.80 0.031 6.59 Kudroli Road MH 1675 to O 32 For Household Connection- Zone 3 Part 2 (MH = 121 Nos, L=5m X 4 connections in each manhole) Road width →3m For Household Connection- Zone 3 Part 2 (MH = 5 Nos, L=5m X 4 connections in each manhole) - Road width √3m Total Ded Total Ded Total Sand Qty for pipe line trench For Manhole side C Zone- 3 [Part - 2) PM Rao Road MH 157 to O44 Sharavu Ganapati Temple Road and Car Street Cross Road MH 157 to O44 Sharavu Ganapati Temple cross Road MH 557 to MH 1932 Cum 2 2.00 2.00 1.64 MH 1930 50 MH 1725 Sharavu Ganapati Temple cross Road MH 157 to MH 0-27 Car Street and Cross Road MH 157 to MH 0-27 Cum 4 2.00 2.00 2.00 1.65 ASR Pai Road MH 1531 to O 55 ASR Pai Road MH 1531 to O 61 Car Street Road MH 1531 to O 61 Car Street Road MH 1581 to O 62 Car Street Road MH 1581 to O 63 Car Street Road MH 1581 to O 61 Car Street Road MH 1581 to O 62 Car Street Road MH 1581 to O 63 Car Street Road MH 1580 to O 61 Car Street Road MH 1580 to O 61 Car Street Road MH 1580 to O 61 Car Street Road MH 1581 to O 63 Car Street Road MH 1581 to O 63 Car Street Road MH 1581 to O 63 Car Street Road MH 1581 to O 61 Car Street Road MH 1581 to O 62 Car Street Road MH 1581 to O 63 Car Street Road MH 1581 to O 61 Car Street Road MH 1581 to O 63 Car Street Road MH 1581 to O 64 Car Street Road MH 1581 to O 65 Cum 2 2 2.00 2.00 1.77 42.56 Car Street Road MH 1581 to O 66 Cum 2 2 2.00 2.00 1.77 42.56 Car Street Road MH 1581 to O 61 Cum 6 2.00 2.00 1.77 42.56 Car Street Road MH 1581 to O 63 Cum 7 2.00 2.00 1.77 42.56 Car Street Road MH 1581 to O 61 Cum 8 2.00 2.00 1.79 13.94 MH 1673 to MH 1589 MH 1673 to MH 1589 MH 1675 to O 32 Cum 4 2.00 2.00 1.79 13.94		MH 1528 to O26	Cum	-1	133.20	0.0	31	-4.18
KSR Cross Road		Car Street Cross Road						
MH 1673 to MH 1529		MH 569 to O 26	Cum	-1	47.20	0.0	31	-1.48
Number N		KSR Cross Road						
MH 1657 to O 32		MH 1673 to MH 1529	Cum	-1	219.80	0.0	31	-6.90
For Household Connection- Zone 3 Part 2 (MH = 121 Nos, L=5m X 4 connections in each manhole) Road width >3m For Household Connection- Zone 3 Part 2 (MH = 5 Nos, L=5m X 4 connections in each manhole) - Road width <3m Total Ded Total Ded Total Sand Qty for pipe line trench Cum Cum Cum Total Sand Qty for pipe line trench Cum Cum Cum Cum Cum Cum Cum Cu		Kudroli Road						
Connections in each manhole) Road width >3m		MH 1657 to O 32	Cum	-1	100.70	0.0	31	-3.16
For Household Connection- Zone 3 Part 2 (MH = 5 Nos, L=5m X 4 connections in each manhole) - Road width <3m Total Ded Total Sand Qty for pipe line trench Cum Cum S15.18 For Manhole side C Zone- 3 (Part - 2) PM Rao Road MH 1157 to 044 Sharavu Ganapati Temple Road and Car Street Cross Road MH 2506 to MH 1725 Car Street And Cross Road MH 1719 to MH 0-27 Car Street Road MH 1231 to 0 56 Cum MH 1300 to 0 53 ASR Pai Road MH 1538 to 0.61 Car Street Road MH 1538 to 0.61 Cum MH 1538 to 0.61 Cum MH 1538 to 0.62 Cum MH 1538 to 0.61 Cum MH 1537 to MH 1529 Cum MH 1657 to 0.32		•	Cum	-121	20.00	0.009	-22.99	
Connections in each manhole) - Road width <3m Cum -5 20.00 0.009 -0.99		·						
Total Ded Total Sand Qty for pipe line trench Cum For Manhole side C Zone- 3 (Part- 2) PM Rao Road MH 1157 to O44 Sharavu Ganapati Temple Road and Car Street Cross Road MH 2506 to MH 1725 Sharavu Ganapati Temple cross Road MH 567 to MH 1932 Cum MH 157 to O45 Car Street And MH 1231 to O56 VT Road MH 1300 to O53 Carstreet Road MH 1513 to O61 Car Street Road MH 1513 to O62 Car Street Cross Road MH 1528 to O26 Car Street Cross Road MH 1569 to O 26 Car Street Cross Road MH 1573 to MH 1529 Car Street Cross Road MH 1673 to MH 1529 Car Street Cross Road MH 1673 to MH 1529 Car Street Cross Road MH 1673 to MH 1529 Car Street Cross Road MH 1675 to O 32 Car Street Cross Road MH 1675 to O 32 Car Street Cross Road MH 1675 to O 32 Car Street Cross Road MH 1675 to O 32 Car Street Cross Road MH 1675 to O 32 Car Street Cross Road MH 1675 to O 32 Car Street Cross Road MH 1675 to O 32 Car Street Cross Road		•	Cum	-5	20.00	0.0	09	-0.95
Total Sand Qty for pipe line trench		connections in each mannole) - Road width <3m						
Total Sand Qty for pipe line trench		Total Dod						00.40
For Manhole side C Zone- 3 (Part - 2) PM Rao Road MH 1157 to 044 Cum 6 2.00 2.00 1.64 39.28 Sharavu Ganapati Temple Road and Car Street Cross Road MH 2506 to MH 1725 Sharavu Ganapati Temple cross Road MH 567 to MH 1932 Cum 2 2.00 2.00 1.78 14.26 Car Street and Cross Road MH 1231 to 056 Cum 4 2.00 2.00 2.98 238.36 VT Road MH 1330 to 053 Carstreet Road MH 1530 to 061 Cum 7 2.00 2.00 2.64 210.86 Car Street Road MH 1513 to 061 Cum 7 2.00 2.00 1.77 42.58 Car Street Road MH 1530 to 063 Car Street Road MH 1530 to 061 Cum 7 2.00 2.00 1.60 44.88 Car Street Road MH 1530 to 061 Cum 6 2.00 2.00 1.77 42.58 Car Street Cross Road MH 1590 0 26 Cum 8 2.00 2.00 1.75 13.96 KSR Cross Road MH 1673 to MH 1529 Cum 8 2.00 2.00 1.72 55.04 Kudroli Road MH 1657 to 0 32 Cum 1,79 28.76			Cum					
C Zone-3 (Part-2)		Total Sand Qty for pipe line trench	Cum					313.10
PM Rao Road		For Manhole side						
MH 1157 to 044 Cum 6 2.00 2.00 1.64 39.28	С	Zone- 3 (Part- 2)						
Sharavu Ganapati Temple Road and Car Street Cross Road		PM Rao Road						
MH 2506 to MH 1725 Cum 18 2.00 2.00 1.94 139.58		MH 1157 to O44	Cum	6	2.00	2.00	1.64	39.28
Sharavu Ganapati Temple cross Road		Sharavu Ganapati Temple Road and Car Street Cross Road						
MH 567 to MH 1932		MH 2506 to MH 1725	Cum	18	2.00	2.00	1.94	139.58
Car Street and Cross Road Cum 20 2.00 2.00 2.98 238.36 Carstreet Road Cum 4 2.00 2.00 1.65 26.38 VT Road Cum 4 2.00 2.00 2.64 210.86 ASR Pai Road Cum 7 2.00 2.00 1.60 44.88 Car street Road Cum 7 2.00 2.00 1.77 42.58 Car Street Cross Road Cum 6 2.00 2.00 1.77 42.58 KSR Cross Road Cum 2 2.00 2.00 1.75 13.96 KSR Cross Road Cum 8 2.00 2.00 1.72 55.04 Kudroli Road MH 1657 to 0 32 Cum 4 2.00 2.00 1.79 28.70		Sharavu Ganapati Temple cross Road						
MH1719 to MH O-27 Cum 20 2.00 2.00 2.98 238.36 Carstreet Road Cum 4 2.00 2.00 1.65 26.38 VT Road VT Road <td< td=""><td></td><td>MH 567 to MH 1932</td><td>Cum</td><td>2</td><td>2.00</td><td>2.00</td><td>1.78</td><td>14.26</td></td<>		MH 567 to MH 1932	Cum	2	2.00	2.00	1.78	14.26
Carstreet Road Cum 4 2.00 2.00 1.65 26.38 VT Road Cum 20 2.00 2.00 2.64 210.86 MH 1300 to 0 53 Cum 20 2.00 2.00 2.64 210.86 ASR Pai Road Cum 7 2.00 2.00 1.60 44.88 Car street Road Cum 6 2.00 2.00 1.77 42.58 Car Street Cross Road Cum 6 2.00 2.00 1.77 42.58 MH 1569 to 0 26 Cum 2 2.00 2.00 1.75 13.96 KSR Cross Road Cum 8 2.00 2.00 1.72 55.04 Kudroli Road MH 1657 to 0 32 Cum 4 2.00 2.00 1.79 28.70		Car Street and Cross Road						
MH 1231 to 0 56 Cum 4 2.00 2.00 1.65 26.38 VT Road Image: Common Commo		MH1719 to MH O-27	Cum	20	2.00	2.00	2.98	238.36
VT Road Cum 20 2.00 2.00 2.64 210.86 ASR Pai Road Cum 7 2.00 2.00 1.60 44.88 MH 1513 to 0 61 Cum 7 2.00 2.00 1.60 44.88 Car street Road Cum 6 2.00 2.00 1.77 42.58 Car Street Cross Road Cum 2 2.00 2.00 1.75 13.96 KSR Cross Road Cum 8 2.00 2.00 1.72 55.04 MH 1673 to MH 1529 Cum 8 2.00 2.00 1.72 55.04 Kudroli Road MH 1657 to 0 32 Cum 4 2.00 2.00 1.79 28.70								
MH 1300 to 0 53 Cum 20 2.00 2.00 2.64 210.86 ASR Pai Road Cum 7 2.00 2.00 1.60 44.88 Car street Road Cum 6 2.00 2.00 1.77 42.58 Car Street Cross Road Cum 2 2.00 2.00 1.75 13.96 MH 1673 to MH 1529 Cum 8 2.00 2.00 1.72 55.04 Kudroli Road MH 1657 to 0 32 Cum 4 2.00 2.00 1.79 28.70			Cum	4	2.00	2.00	1.65	26.38
ASR Pai Road Cum 7 2.00 2.00 1.60 44.88 Car street Road Cum 6 2.00 2.00 1.77 42.58 Car Street Cross Road Cum 6 2.00 2.00 1.77 42.58 MH 569 to 0 26 Cum 2 2.00 2.00 1.75 13.96 KSR Cross Road Cum 8 2.00 2.00 1.72 55.04 MH 1673 to MH 1529 Cum 8 2.00 2.00 1.72 55.04 Kudroli Road MH 1657 to 0 32 Cum 4 2.00 2.00 1.79 28.70		VT Road						
MH 1513 to 0 61 Cum 7 2.00 2.00 1.60 44.88 Car street Road Image: Cum of the control of the			Cum	20	2.00	2.00	2.64	210.86
Car street Road Cum 6 2.00 2.00 1.77 42.58 Car Street Cross Road Cum 2 2.00 2.00 1.75 13.96 KSR Cross Road Cum 2 2.00 2.00 1.75 13.96 MH 1673 to MH 1529 Cum 8 2.00 2.00 1.72 55.04 Kudroli Road MH 1657 to 0 32 Cum 4 2.00 2.00 1.79 28.70		ASR Pai Road						
MH 1528 to 026 Cum 6 2.00 2.00 1.77 42.58 Car Street Cross Road Cum 2 2.00 2.00 1.75 13.96 KSR Cross Road Cum 8 2.00 2.00 1.72 55.04 MH 1673 to MH 1529 Cum 8 2.00 2.00 1.72 55.04 Kudroli Road Cum 4 2.00 2.00 1.79 28.70		MH 1513 to O 61	Cum	7	2.00	2.00	1.60	44.88
Car Street Cross Road Cum 2 2.00 2.00 1.75 13.96 MH 569 to 0 26 Cum 2 2.00 2.00 1.75 13.96 KSR Cross Road Umb 1673 to MH 1529 MH 1673 to MH 1529 Cum 8 2.00 2.00 1.72 55.04 Kudroli Road Umb 1657 to 0 32 Cum 4 2.00 2.00 1.79 28.70								
MH 569 to O 26 Cum 2 2.00 2.00 1.75 13.96 KSR Cross Road Image: Company of the company of t		MH 1528 to O26	Cum	6	2.00	2.00	1.77	42.58
KSR Cross Road Cum 8 2.00 2.00 1.72 55.04 MH 1673 to MH 1529 Cum 8 2.00 2.00 1.72 55.04 Kudroli Road Cum 4 2.00 2.00 1.79 28.70 MH 1657 to O 32 Cum 4 2.00 2.00 1.79 28.70		Car Street Cross Road						
MH 1673 to MH 1529 Cum 8 2.00 2.00 1.72 55.04 Kudroli Road MH 1657 to O 32 Cum 4 2.00 2.00 1.79 28.70		MH 569 to O 26	Cum	2	2.00	2.00	1.75	13.96
Kudroli Road		KSR Cross Road						
MH 1657 to O 32 Cum 4 2.00 2.00 1.79 28.70		MH 1673 to MH 1529	Cum	8	2.00	2.00	1.72	55.04
002 00		MH 1657 to O 32	Cum	4	2.00	2.00	1.79	28.70
, ,					<u> </u>			853.88

Sr.No.	Description of Work	UNIT	No	LENGTH	BREADTH	DEPTH	QUANTITY
D	Zone- 3 (Part- 2)			Area=	Pi*r*r		
	Ded Manhole portion for 1.2m Dia	Cum	-92		11	2.31	-449.83
	Ded Manhole portion for 1.5m Dia	Cum	-5	2.	44	4.79	-58.32
E	Deduction for PCC and Raft						
	For 1.2m Dia Manhole-PCC	Cum	-92	2.00	2.00	0.15	-55.20
	For 1.2m Dia Manhole-Raft	Cum	-92	1.80	1.80	0.30	-89.42
	For 1.5m Dia Manhole-PCC	Cum	-5	2.30	2.30	0.15	-3.97
	For 1.5m Dia Manhole-Raft	Cum	-5	2.10	2.10	0.30	-6.62
	Total Deduction Qty	Cum					-762.75
	Total Net Qty	Cum				Net Total	606.31
	Total Qty of sand bedding in trench line	Cum					515.18
	Sand - 10% of total bedding qty	Cum					51.52
13	Providing Muram/Gravel Bedding for the pipeline trenches including watering and consolidation by punners etc., complete with all lead and lift as directed including barricading, danger lighting etc., as directed by the Engineer-in-Charge etc., complete, for all type of soils excluding black cotton soil and rock reaches. KUWSDB Pg No.17,SI No.6.1,6.2						
	Total bedding quantity	Cum	1				515.18
	Murrum/Gravel - 70% of total bedding qty	Cum	1				360.63
14	KSRB 4-1.6; Providing and laying in position plain cement concrete of mix 1:2:4 with cement @ 240kgs, with 20mm and down size graded granite metal coarse aggregates @ 0.69 cum and fine aggregtes @ 0.459cum, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation, plinth and cills, ncluding cost of all materials, labour, HOM of machinery, curing complete as per specifications. Specification No. KBS 4.1, 4.2. KSRB 16-17, Pg No.12,SI No.4.6						
	Total bedding quantity	Cum	1				515.18
	PCC M15 at water logged area & drains- 20% of total bedding qty	Cum	1				103.04
15	Supplying Unplasticised PVC pipes confirming to IS 15328:2003 with latest amendments ended with integral sockets with ISI mark and conveying to worksite,rolling and lowering into trenches,Laying true to line and level and perfect linking at joints,testing and commissioning,including loading and unloading at both destinations and cuts of pipes wherever necessary including jointing of UPVC Pipes (with cost of elastomeric sealing rings) and specials (excluding cost of specials) with jointing of approved type,with all labour with all lead and lift including encasing the pipe alround to a depth of not less than 15cms with soft gravel or selected earth available from the excavation etc.,complete and giving neccessary hydraulic test to the required pressure as per ISS (Contractor will make his own arrangements for procuring water for testing)						
Δ.	Supply and laying of PVC- U Pipes as per IS 15328 SN 4 -Ring tite: 200mm						
A	Zone- 3 (Part- 2) PM Rao Road						
	MH 1157 to 044	Rmt	1	169.00			169.00
	Sharavu Ganapati Temple Road and Car Street Cross Road		-				
	MH 2506 to MH 1725	Rmt	1	417.60			417.60
	Sharavu Ganapati Temple cross Road						
	MH 567 to MH 1932	Rmt	1	48.30			48.30
	Car Street and Cross Road						
	MH1719 to MH O-27	Rmt	1	478.00			478.00
	Carstreet Road		_	105 = -			4.5.
	MH 1231 to 0 56	Rmt	1	100.50			100.50
-	VT Road MH 1300 to 0.53	Pm+	1	402.20			102 20
<u> </u>	MH 1300 to O 53	Rmt		492.20			492.20

Sr.No.	Description of Work	UNIT	No	LENGTH	BREADTH	DEPTH	QUANTITY
	ASR Pai Road	Dest	1	100 70			100 70
	MH 1513 to 0 61 Car street Road	Rmt	1	196.70			196.70
	MH 1528 to O26	Rmt	1	133.20			133.20
	Car Street Cross Road						
	MH 569 to O 26	Rmt	1	47.20			47.20
	KSR Cross Road						
	MH 1673 to MH 1529	Rmt	1	219.80			219.80
	Kudroli Road	Б.,	4	100 70			400.70
	MH 1657 to O 32	Rmt Rmt	1	100.70		Total	100.70 2403.00
		KIII				TOtal	2403.00
	Supplying Unplasticised PVC pipes confirming to IS 15328:2003 with						
	latest amendments ended with integral sockets with ISI mark and						
	conveying to worksite, rolling and lowering into trenches, Laying true to						
	line and level and perfect linking at joints, testing and commissioning, including loading and unloading at both destinations and						
	cuts of pipes wherever necessary including jointing of UPVC Pipes (with						
1.0	cost of elastomeric sealing rings) and specials (excluding cost of						
16	specials) with jointing of approved type, with all labour with all lead and						
	lift including encasing the pipe alround to a depth of not less than 15cms						
	with soft gravel or selected earth available from the excavation						
	etc.,complete and giving neccessary hydraulic test to the required						
	pressure as per ISS (Contractor will make his own arrangements for						
	procuring water for testing)						
	KUWSDB.Pg No 207 and 207.SL No b1 Supply and laying of PVC- U Pipes as per IS 15328 SN 8 -Ring tite:						
	110mm						
	For Household Connection- Zone 3 Part 2 (MH = 121 Nos, L=5m X 4	Rmt	121	20.00			2420.00
	connections in each manhole) Road width >3m For Household Connection- Zone 3 Part 2 (MH =5 Nos, L=5m X 4						
	connections in each manhole) - Road width <3m	Rmt	5	20.00			100.00
	,	Rmt				Total	2520.00
	Construction RCC M25 circular inspection chamber 600 mm dia x						
	600mm depth (clear inside dimension) for single pipeline, with M15 PCC bed for 100 mm thick using mix with cement @240 kgs granite graded						
	metal of 20 mm and down size and clean sieved river sand, M25 RCC						
	raft & sidewall concrete with 20mm and downsize granite metal, , finish						
17	smooth with a floating coat of cement on walls and bed concrete						
17	complete, including fixing and grouting of pipes, including conveying to						
	work spot supply and fixing SFRC manhole cover and frame (Heavy						
	Duty) confirming to IS: 12592 with latest amendments as per standard						
	design including cost of reinforcement, all materials, labour charges,						
	curing complete as per specifications. As Per Data Rate						
	Zone 3 Part 2						
	For Household Connection- Zone 3 Part 2 (MH =121 Nos, L=5m X 4	Nos	242				242.00
	connections in each manhole) - Road width >3m		242				
		Nos				Total	242.00
	Making connections of drain or sewer line of size 100mm to 230mm						
	external dia with existing manhole including breaking into and making						
	good the walls, floors with cement concrete M15 with 20mm and						
18	downsize granite metal mix cement plastered on both sides with						
	cement mortar 1:3 finished with a floating coat of neat cement and						
	making necessary channels for the drain etc., complete						
	PWD SR 2016-17,SI No.11.47.3,Pg No.73						
	Connecting Line to Existing manhole MH-1322 to O-61	Nos	1				1.00
	MH-1532 to 0-26	Nos	1				1.00
	MH-1560 to O-26	Nos	1				1.00
	MH-1700 to O-65	Nos	1				1.00
	MH-1569 to O-55	Nos	1				1.00
	MH-1739 to O-29	Nos	1				1.00
	MH-1742 to O-28	Nos	1				1.00
	MH-1733 to 053	Nos	1				1.00
	MH-1598 to O-56 MH-1230 to O-27	Nos Nos	1				1.00 1.00
	MH-1169 to O-58	Nos	1				1.00
	MH-1631 to 0-67	Nos	1				1.00
	MH-1652 to O-32	Nos	1				1.00
		Nos				Total	13.00

Sr.No.	Description of Work	UNIT	No	LENGTH	BREADTH	DEPTH	QUANTITY
	Constructing RCC Manhole chamber of 1:1.5:3 proportion or approved						
	type pre-cast RCC manhole chambers, constructed using form vibrators						
	of standard type, with barricading, danger lighting and using of sight						
	rails and boning rods wherever necessary , shoring and strutting						
	wherever required using ordinary port land cement, using 1:1.5:3						
	proportion RCC with 20 mm and down graded jelly, well graded sand and steel of approved quality, 200 mm thick top concrete slab, having						
	wall thickness and raft thickness as in approved drawings and with an						
	offset in raft alround the chamber as in approved drawing, benching						
	concrete with 1:6 slope towards the central drain finished smooth,						
19	including fixing and grouting of pipes, including conveying to work spot						
19	supply and fixing SFRC manhole cover and frame (Heavy Duty)						
	confirming to IS: 12592 with latest amendments, on a bed of CC 1:2:4						
	supplying and fixing of minimum 3 mm thick encapsulated plastic						
	footsteps (as per IS 10910) on 12 mm dia. Grade Fe-415 steel bar (as						
	per IS 1786) staggered at 300 mm apart as detailed in Technical						
	specifications, including sand bedding wherever required, disposal of						
	surplus earth, watering, curing, engraving manhole number with flow						
	direction on the inner cylindrical surface etc., complete including cost of						
	reinforcement steel and fabrication charges and also cost and						
	conveyance of all materials, labour with all lead and lifts for various						
Α	Zone 3 Part 2						
	1.2m Dia Manholes						
	For 1.1m Depth	Nos	4				4.00
	For 1.2m Depth	Nos	44				44.00
	For 1.3m Depth	Nos	13				13.00
	For 1.4m Depth	Nos	6				6.00
	For 1.5m Depth	Nos	6				6.00
	For 1.6m Depth	Nos	12				12.00
	For 1.7m Depth For 1.8m Depth	Nos Nos	5 3				5.00 3.00
	For 1.9m Depth	Nos	2				2.00
	For 2.0m Depth	Nos	2				2.00
	For 2.2m Depth	Nos	2				2.00
	For 2.3m Depth	Nos	2				2.00
	For 2.4m Depth	Nos	2				2.00
	For 2.5m Depth	Nos	2				2.00
	For 2.6m Depth	Nos	2				2.00
	For 2.7m Depth	Nos	1				1.00
	For 2.8m Depth	Nos	3				3.00
	For 2.9m Depth	Nos	2				2.00
	For 3.0m Depth	Nos	3				3.00
	For 3.1m Depth For 3.2m Depth	Nos Nos	4 1				4.00 1.00
	FOI 3.2III Deptil	Nos	1		Total		121.00
	1.5m Dia Manholes	1403			Total		121.00
	For 3.8m Depth	Nos	1				1.00
	For 4.3m Depth	Nos	2				2.00
	For 4.6m Depth	Nos	1				1.00
	For 4.9m Depth	Nos	1				1.00
		Nos			Total		5.00
		Nos				Total	126.00
	Defilies Disaltes Tassakas and Control of the Contr						
	Refilling Pipeline Trenches and foundation with selected available earth						
20	from trench excavation and foundation including watering, consolidation in layers of 15cms., thick including disposing off the surplus earth with all						
20	lead and lift.						
	KUWSDB Pg No 15,SI No 2						
Α	Zone 3 Part 2						
а	Excavation Qty (Pipe Line trench and manhole) -SI No 5	Cum	1				7672.24
b	Deduction						
	Sand Bed Qty (Only for Pipe line trench and Household)-SI No 12	Cum	-1				-515.18
	Pipe Qty - SI No 12	Cum	-1				-99.40
	PCC and Raft Qty for manhole - SI No 12	Cum	-1				-155.21
	Manhole Ded - SI No 12	Cum	-1				-508.15
	Bituminous layer Qty (Sl No.22,23,25 & 26) GSB and WMM	Cum	-1		al Dadii III	N4	-3181.78
				Tot	al Refilled C	ιγ	3212.52

Sr.No.	Description of Work	UNIT	No	LENGTH	BREADTH	DEPTH	QUANTITY
	Removal of Unserviceable Soil with Disposal						
	KSRRB M300-19. Removal of unserviceable soil including excavation,						
71	loading and disposal but excluding replacement by suitable soil which						
	shall be paid separately as per clause 300.5 complete as per						
	specifications. MORTH Specification No. 301						
Α	KPWD Pg No. 144 ,SI No.19.20 Zone 3 Part 2						
	Excavation Qty (SI No 4,5 and 6)	Cum	1				7672.24
	Deduction	Cuin					7072.24
	Refilled Excavated Soil Qty (SI No. 14)	Cum	-1				-3212.52
	Total Qty	Cum					4459.72
	Deduct 0.75% Wastage during loading	Cum	-1				-33.45
	Net Qty	Cum					4426.27
	VCDDD M400 C 2. County of						
	KSRRB M400-6.2. Construction of Granular Sub-base by Providing Close						
	graded cushed stone aggregates of granite /trap/basalt material spreading in uniform layers with motor grader on prepared surface,						
	mixing by mix in place method by rotavator at OMC, and compacting						
	with vibratory power roller to achieve the desired density, complete as						
	per specifications.						
	B. By mix in place Method						
	For grading II material						
	KSRB Pg No.155,20.5.2						
Α	Zone- 3 (Part- 2)						
	Only for Pipe portion trench						
	PM Rao Road			450.00	4.00	2.22	60.04
	MH 1157 to 044	Cum	1	169.00	1.20	0.30	60.84
	Sharavu Ganapati Temple Road and Car Street Cross Road	C	-	417.00	2.10	0.20	262.00
	MH 2506 to MH 1725 Sharavu Ganapati Temple cross Road	Cum	1	417.60	2.10	0.30	263.09
	MH 567 to MH 1932	Cum	1	48.30	1.20	0.30	17.39
	Car Street and Cross Road	Cuiii		40.50	1.20	0.50	17.55
	MH1719 to MH O-27	Cum	1	478.00	2.10	0.30	301.14
	Carstreet Road						
	MH 1231 to O 56	Cum	1	100.50	1.20	0.30	36.18
	VT Road						
	MH 1300 to O 53	Cum	1	492.20	2.10	0.30	310.09
	ASR Pai Road						
	MH 1513 to 0 61	Cum	1	196.70	1.20	0.30	70.81
	Car street Road	C	-	422.20	1 20	0.20	47.05
	MH 1528 to O26 KSR Cross Road	Cum	1	133.20	1.20	0.30	47.95
	MH 1673 to MH 1529	Cum	1	219.80	1.20	0.30	79.13
	Kudroli Road	Cuiii	-	213.00	1.20	0.50	75.13
	MH 1657 to 0 32	Cum	1	100.70	1.20	0.30	36.25
		Cum					1222.87
В	Zone- 3 (Part- 2)						
	Only for Manhole portion						
	PM Rao Road						
	MH 1157 to O44	Cum	6	2.00	2.00	0.30	7.20
	Sharavu Ganapati Temple Road and Car Street Cross Road		4.5				4
	MH 2506 to MH 1725	Cum	18	2.00	2.00	0.30	21.60
	Sharavu Ganapati Temple cross Road	C	2	2.00	2.00	0.30	2.40
	MH 567 to MH 1932 Car Street and Cross Road	Cum	2	2.00	2.00	0.30	2.40
	MH1719 to MH 0-27	Cum	20	2.00	2.00	0.30	24.00
	Carstreet Road	Cuili	20	2.00	2.00	0.50	24.00
	MH 1231 to 0 56	Cum	4	2.00	2.00	0.30	4.80
	VT Road						
	MH 1300 to O 53	Cum	20	2.00	2.00	0.30	24.00
	ASR Pai Road						
	MH 1513 to O 61	Cum	7	2.00	2.00	0.30	8.40
	Car street Road						
	MH 1528 to O26	Cum	6	2.00	2.00	0.30	7.20
	KSR Cross Road						
	MH 1673 to MH 1529	Cum	8	2.00	2.00	0.30	9.60
	Kudroli Road MH 1657 to O 32	Cum	1	2.00	2.00	0.20	4.00
		ı Culli	4	2.00	2.00	0.30	4.80

	Description of Work	UNIT	No	LENGTH	BREADTH	DEPTH	QUANTITY
	For Household Connection- Zone 3 Part 2 (MH = 110 Nos, L=10.5m X 4 connections in each manhole) Road width >3m and 50% of length	Cum	110	10.00	0.60	0.30	198.00
	For Household Connection- Zone 3 Part 2 (MH =1 Nos, L=10.5m X 4 connections in each manhole) - Road width <3m and 50% of length	Cum	1	10.00	0.60	0.30	1.80
				Area (Pi*r*r)		
С	Zone- 3 (Part- 2)			711001	,		
	Ded Manhole top cover Dia 0.60m and base dia 1.2m	Cum	-107		283	0.30	-9.07
	Ded Manhole top cover Dia 0.60m and base dia 1.5m	Cum Cum	-4	0.2	283	0.30 Total	-0.34 1527.26
23	KSRRB M400- Wet Mix macadam KSRRB M400-17. Providing, laying, spreading and compacting cushed stone aggregates of granite/trap/basalt to wet mix macadam specification including per mixing the material with water at OMC in Mechanical mix plant carriage of mixed material by tipper to site, laying in uniform layers with paver in subbase/base course on well prepared surface and compacting with vibratory roller to achieve the desired density complete as per specification. MORTH Specification NO.406						
	Zone- 3 (Part- 2)						
	Only for Pipe portion trench						
	PM Rao Road						
	MH 1157 to O44 Sharavu Ganapati Temple Road and Car Street Cross Road	Cum	1	169.00	1.20	0.25	50.70
	MH 2506 to MH 1725	Cum	1	417.60	2.10	0.25	219.24
	Sharavu Ganapati Temple cross Road MH 567 to MH 1932	Cum	1	48.30	1.20	0.25	14.49
	Car Street and Cross Road			10.00	1.20	0.23	25
	MH1719 to MH 0-27	Cum	1	478.00	2.10	0.25	250.95
	Carstreet Road	Cum	1	100.50	1.20	0.25	30.15
	MH 1231 to O 56 VT Road	Cum	1	100.50	1.20	0.25	30.15
	MH 1300 to O 53	Cum	1	492.20	2.10	0.25	258.41
	ASR Pai Road						
	MH 1513 to O 61 Car street Road	Cum	1	196.70	1.20	0.25	59.01
	MH 1528 to O26 KSR Cross Road	Cum	1	133.20	1.20	0.25	39.96
	MH 1673 to MH 1529	Cum	1	219.80	1.20	0.25	65.94
	Kudroli Road MH 1657 to O 32	Cum	1	100.70	1.20	0.25	30.21
	IVIII 1037 to 0 32	Cum	1	100.70	1.20	0.23	1019.06
В	Zone- 3 (Part- 2)						
	Only for Manhole portion						
	PM Rao Road			2.00	2.00	0.25	6.00
	MH 1157 to O44 Sharavu Ganapati Temple Road and Car Street Cross Road	Cum	6	2.00	2.00	0.25	6.00
	MH 2506 to MH 1725	Cum	18	2.00	2.00	0.25	18.00
	Sharavu Ganapati Temple cross Road						
	MH 567 to MH 1932 Car Street and Cross Road	Cum	2	2.00	2.00	0.25	2.00
	MH1719 to MH O-27	Cum	20	2.00	2.00	0.25	20.00
	Carstreet Road						
	MH 1231 to O 56	Cum	4	2.00	2.00	0.25	4.00
	VT Road MH 1300 to O 53	Cum	20	2.00	2.00	0.25	20.00
	ASR Pai Road	Cum	20	2.00	2.00	0.23	20.00
	MH 1513 to O 61	Cum	7	2.00	2.00	0.25	7.00
	Car street Road	C		2.00	2.00	0.25	6.00
	MH 1528 to O26 KSR Cross Road	Cum	6	2.00	2.00	0.25	6.00
	MH 1673 to MH 1529	Cum	8	2.00	2.00	0.25	8.00
	Kudroli Road			2.25	2.25		
	MH 1657 to O 32	Cum	4	2.00	2.00	0.25	4.00
	For Household Connection- Zone 3 Part 2 (MH = 110 Nos, L=10.5m X 4	Cum	110	10.00	0.60	0.25	165.00
	connections in each manhole) Road width >3m and 50% of length						l I
	For Household Connection- Zone 3 Part 2 (MH =1 Nos, L=10.5m X 4 connections in each manhole) - Road width <3m and 50% of length	Cum	1	10.00	0.60	0.25	1.50

Sr.No.	Description of Work	UNIT	No	LENGTH	BREADTH	DEPTH	QUANTITY
	Zone- 3 (Part- 2)						
	Ded Manhole top cover Dia 0.60m and base dia 1.2m	Cum	-107		283	0.25	
	Ded Manhole top cover Dia 0.60m and base dia 1.5m	Cum Cum	-4	0.2	283 I	0.25 Total	-0.28 1272.71
		Cum				Total	12/2./1
	KSRRB M500-6. Providing and applying primer coat with S.S. bitumen						
	emulsion on prepared surface of granular base such as WMM including						
24	cleaning of road surface and spraying primer at the rate of 0.60 kg /						
24	sqm using mechanical means complete as per specifications. MORTH						
	Specification No. 502						
	KSRB Pg No.161,SI No:21.6						
Α	Zone- 3 (Part- 2)						
	Only for Pipe portion trench PM Rao Road						
	MH 1157 to O44	Sqm	1	169.00	1.20		202.80
	Sharavu Ganapati Temple Road and Car Street Cross Road	ЗЧП	1	109.00	1.20		202.80
	MH 2506 to MH 1725	Sqm	1	417.60	2.10		876.96
	Sharavu Ganapati Temple cross Road	Jqiii		417.00	2.10		070.50
	MH 567 to MH 1932	Sqm	1	48.30	1.20		57.96
	Car Street and Cross Road		_				
	MH1719 to MH O-27	Sqm	1	478.00	2.10		1003.80
	Carstreet Road						
	MH 1231 to O 56	Sqm	1	100.50	1.20		120.60
	VT Road						
	MH 1300 to O 53	Sqm	1	492.20	2.10		1033.62
	ASR Pai Road						
	MH 1513 to O 61	Sqm	1	196.70	1.20		236.04
	Car street Road						
	MH 1528 to O26	Sqm	1	133.20	1.20		159.84
	KSR Cross Road						
	MH 1673 to MH 1529	Sqm	1	219.80	1.20		263.76
	Kudroli Road						
	MH 1657 to O 32	Sqm	1	100.70	1.20		120.84
В	Zone- 3 (Part- 2)						
В	Only for Manhole portion						
	PM Rao Road						
	MH 1157 to O44	Sqm	6	2.00	2.00		24.00
	Sharavu Ganapati Temple Road and Car Street Cross Road						
	MH 2506 to MH 1725	Sqm	18	2.00	2.00		72.00
	Sharavu Ganapati Temple cross Road						
	MH 567 to MH 1932	Sqm	2	2.00	2.00		8.00
	Car Street and Cross Road						
	MH1719 to MH O-27	Sqm	20	2.00	2.00		80.00
	Carstreet Road						
	MH 1231 to O 56	Sqm	4	2.00	2.00		16.00
	VT Road						
	MH 1300 to O 53	Sqm	20	2.00	2.00		80.00
	ASR Pai Road						
	MH 1513 to O 61	Sqm	7	2.00	2.00		28.00
	Car street Road	_	_				
	MH 1528 to O26	Sqm	6	2.00	2.00		24.00
	KSR Cross Road			2.22	2.22		22.22
	MH 1673 to MH 1529	Sqm	8	2.00	2.00		32.00
	Kudroli Road	6	_	2.00	2.00		46.00
	MH 1657 to O 32	Sqm	4	2.00	2.00		16.00
	For Household Connection- Zone 3 Part 2 (MH = 110 Nos, L=10.5m X 4 connections in each manhole) Road width >3m and 50% of length	Sqm	110	10.00	0.60		660.00
	For Household Connection- Zone 3 Part 2 (MH =1 Nos, L=10.5m X 4						
	connections in each manhole) - Road width <3m and 50% of length	Sqm	1	10.00	0.60		6.00
		1		Area (Pi*r*r)		
С	Zone- 3 (Part- 2)				,		
	Ded Manhole top cover Dia 0.60m and base dia 1.2m	Sqm	-107	0.3	283		-30.24
	Ded Manhole top cover Dia 0.60m and base dia 1.5m	Sqm	-107		283		-1.13
		Sqm	<u> </u>	ļ		Total	5090.85
		7 7					, , , , , ,

Sr.No.	Description of Work	UNIT	No	LENGTH	BREADTH	DEPTH	QUANTITY
	Providing and laying bituminous macadam on prepared surface with						
	crushed coarse aggregates as per design mix formula for base / binding course including loading of aggregates with F.E loader, hot mixing of						
	stone aggregates and bitumen in hot mix plant 40/60 TPH capacity,						
	transporting the mixed material in tipper to paver and laying mixed						
	materials with paver finisher to the required level and grade, rolling by						
25	power roller to achieve the desired density, 50 / 75 mm compacted						
	thickness with 3.4% bitumen but excluding cost of primer/tack coat with						
	all lead and lift including cost of materials, labour, HOM of machineries complete as per specifications. MORTH Chapter 5, using 60/70 grade						
	bitumen, Including environmental and social safe guards, including all						
	taxes, as directed by the Engineer-in-Charge etc., complete. 50mm thick						
	KSRRB Pg No.162,SI No. 21.11.6						
	Zone- 3 (Part- 2) Only for Pipe portion trench						
	PM Rao Road						
	MH 1157 to O44	Cum	1	169.00	1.20	0.05	10.14
	Sharavu Ganapati Temple Road and Car Street Cross Road						
	MH 2506 to MH 1725	Cum	1	417.60	2.10	0.05	43.85
	Sharavu Ganapati Temple cross Road	Cum	1	40.20	1 20	0.05	2.00
	MH 567 to MH 1932 Car Street and Cross Road	Cum	1	48.30	1.20	0.05	2.90
	MH1719 to MH O-27	Cum	1	478.00	2.10	0.05	50.19
	Carstreet Road						
	MH 1231 to O 56	Cum	1	100.50	1.20	0.05	6.03
	VT Road	_					54.60
	MH 1300 to 0 53 ASR Pai Road	Cum	1	492.20	2.10	0.05	51.68
	MH 1513 to O 61	Cum	1	196.70	1.20	0.05	11.80
	Car street Road	Cuiii		130.70	1.20	0.03	11.00
	MH 1528 to O26	Cum	1	133.20	1.20	0.05	7.99
	KSR Cross Road						
	MH 1673 to MH 1529	Cum	1	219.80	1.20	0.05	13.19
	Kudroli Road MH 1657 to O 32	Cum	1	100.70	1.20	0.05	6.04
	MIN 1657 to 0 32	Cuiii	1	100.70	1.20	0.03	0.04
	Zone- 3 (Part- 2)						
	Only for Manhole portion						
	PM Rao Road	_	_				
	MH 1157 to 044	Cum	6	2.00	2.00	0.05	1.20
	Sharavu Ganapati Temple Road and Car Street Cross Road MH 2506 to MH 1725	Cum	18	2.00	2.00	0.05	3.60
	Sharavu Ganapati Temple cross Road	Cum	10	2.00	2.00	0.03	5.00
	MH 567 to MH 1932	Cum	2	2.00	2.00	0.05	0.40
	Car Street and Cross Road						
	MH1719 to MH O-27	Cum	20	2.00	2.00	0.05	4.00
	Carstreet Road MH 1231 to O 56	Cum	4	2.00	2.00	0.05	0.80
	VT Road	Cuiii	4	2.00	2.00	0.03	0.80
	MH 1300 to O 53	Cum	20	2.00	2.00	0.05	4.00
	ASR Pai Road						
	MH 1513 to O 61	Cum	7	2.00	2.00	0.05	1.40
	Car street Road			2.00	2.00	2.25	4.20
	MH 1528 to O26 KSR Cross Road	Cum	6	2.00	2.00	0.05	1.20
	MH 1673 to MH 1529	Cum	8	2.00	2.00	0.05	1.60
	Kudroli Road						
	MH 1657 to O 32	Cum	4	2.00	2.00	0.05	0.80
	For Household Connection- Zone 3 Part 2 (MH = 110 Nos, L=10.5m X 4	Cum	110	10.00	0.60	0.05	33.00
	connections in each manhole) Road width >3m and 50% of length	Cuill	110	10.00	5.00	0.03	33.00
	For Household Connection- Zone 3 Part 2 (MH =1 Nos, L=10.5m X 4 connections in each manhole) - Road width <3m and 50% of length	Cum	1	10.00	0.60	0.05	0.30
	,			Area (Pi*r*r)		
	Zone- 3 (Part- 2)			7.1.00	.,		
	Ded Manhole top cover Dia 0.60m and base dia 1.2m	Cum	-107	0.	28	0.05	-1.51
	Ded Manhole top cover Dia 0.60m and base dia 1.5m	Cum	-4	0.	28	0.05	-0.06
		Cum				Total	254.54

Sr.No.	Description of Work	UNIT	No	LENGTH	BREADTH	DEPTH	QUANTITY
	KSRRB 500-7. Providing and applying tack coat using 80/100 grade						
	bitumen(VG10) on the prepared black topped surfaces at 2.5 kg per 10						
	sqm, heating bitumen in boiler fitted with spray set (excluding cleaning						
26	of road surface) including cost of all materials, labour, HOM of						
	machineries complete as per specifications. MORTH/Chapter 5						
	KSRB Pg No.161,Sl No:21.7 Rev Rate-18.12.2017						
	Zone- 3 (Part- 2)						
	Only for Pipe portion trench						
	PM Rao Road						
	MH 1157 to O44	Sqm	1	169.00	1.20		202.80
	Sharavu Ganapati Temple Road and Car Street Cross Road						
	MH 2506 to MH 1725	Sqm	1	417.60	2.10		876.96
	Sharavu Ganapati Temple cross Road						
	MH 567 to MH 1932	Sqm	1	48.30	1.20		57.96
	Car Street and Cross Road						
	MH1719 to MH O-27	Sqm	1	478.00	2.10		1003.80
	Carstreet Road						
	MH 1231 to O 56	Sqm	1	100.50	1.20		120.60
	VT Road						
	MH 1300 to O 53	Sqm	1	492.20	2.10		1033.62
	ASR Pai Road	'					
	MH 1513 to O 61	Sqm	1	196.70	1.20		236.04
	Car street Road						
	MH 1528 to O26	Sqm	1	133.20	1.20		159.84
	KSR Cross Road	- '					
	MH 1673 to MH 1529	Sqm	1	219.80	1.20		263.76
	Kudroli Road						
	MH 1657 to O 32	Sqm	1	100.70	1.20		120.84
	Zone- 3 (Part- 2)						
	Only for Manhole portion						
	PM Rao Road						
	MH 1157 to O44	Sqm	6	2.00	2.00		24.00
	Sharavu Ganapati Temple Road and Car Street Cross Road	- '					
	MH 2506 to MH 1725	Sqm	18	2.00	2.00		72.00
	Sharavu Ganapati Temple cross Road						
	MH 567 to MH 1932	Sqm	2	2.00	2.00		8.00
	Car Street and Cross Road	- '					
	MH1719 to MH O-27	Sqm	20	2.00	2.00		80.00
	Carstreet Road						
	MH 1231 to 0 56	Sqm	4	2.00	2.00		16.00
	VT Road	- 1					
	MH 1300 to O 53	Sqm	20	2.00	2.00		80.00
	ASR Pai Road						
	MH 1513 to O 61	Sqm	7	2.00	2.00		28.00
	Car street Road		-				
	MH 1528 to O26	Sqm	6	2.00	2.00		24.00
	KSR Cross Road	Sqiii		2.00	2.00		21.00
	MH 1673 to MH 1529	Sqm	8	2.00	2.00		32.00
	Kudroli Road	Sqiii		2.00	2.00		32.00
	MH 1657 to 0 32	Sqm	4	2.00	2.00		16.00
	1037 10 0 32	Jqiii	7	2.00	2.00		10.00
	For Household Connection- Zone 3 Part 2 (MH = 110 Nos, L=10.5m X 4						
	connections in each manhole) Road width >3m and 50% of length	Sqm	110	10.00	0.60		660.00
	, ,						
	For Household Connection- Zone 3 Part 2 (MH =1 Nos, L=10.5m X 4	Sqm	1	10.00	0.60		6.00
	connections in each manhole) - Road width <3m and 50% of length	34	,		3.00		0.00
				Area (Pi*r*r)		
	Zone- 3 (Part- 2)					-	
	Ded Manhole top cover Dia 0.60m and base dia 1.2m	Sqm	-107	0.	28		-30.24
	Ded Manhole top cover Dia 0.60m and base dia 1.5m	Sqm	-4	0.	28		-1.13
		Sqm				Total	5090.85

Sr.No.	Description of Work	UNIT	No	LENGTH	BREADTH	DEPTH	QUANTITY
	Providing and laying Semi dense bituminous concrete with 40-60 TPH						
	batch type HMP producing an average output of 75 tonnes per hour using crushed aggregates of specified grading, premixed with						
	bituminous binder at 4.5 to 5% of mix and filter, transporting the hot						
	mix to work site, laying with a hydrostatic paver finisher with						
	mechanical paver to the required grade, level and alignment, rolling						
27	with smooth wheeled, vibratory and tandem rollers to achieve the						
	desired compaction as per MORTH specification clause no. 500.8, 25 mm compacted thickness with 5% bitumen 60/70 grade using 40-60						
	HMP (Grading II) using mechnical paver, with all lead and lift ,Labour, as						
	per specification, Including environmental and social safe guards,						
	including all taxes, as directed by the Engineer-in-Charge etc., complete.						
	25mm thick						
	KSRRB Pg No.163,SI No. 21.20.6						
	Zone- 3 (Part- 2) Only for Pipe portion trench						
	PM Rao Road						
	MH 1157 to O44	Cum	1	169.00	1.20	0.025	5.07
	Sharavu Ganapati Temple Road and Car Street Cross Road						
	MH 2506 to MH 1725	Cum	1	417.60	2.10	0.025	21.92
	Sharavu Ganapati Temple cross Road MH 567 to MH 1932	Cum	1	40.20	1 20	0.025	1 45
	Car Street and Cross Road	Cum	1	48.30	1.20	0.025	1.45
	MH1719 to MH O-27	Cum	1	478.00	2.10	0.025	25.10
	Carstreet Road						
	MH 1231 to O 56	Cum	1	100.50	1.20	0.025	3.02
	VT Road			100.00	2.12	2 225	25.24
	MH 1300 to O 53 ASR Pai Road	Cum	1	492.20	2.10	0.025	25.84
	MH 1513 to O 61	Cum	1	196.70	1.20	0.025	5.90
	Car street Road			250.70	1.20	0.025	0.50
	MH 1528 to O26	Cum	1	133.20	1.20	0.025	4.00
	KSR Cross Road						
	MH 1673 to MH 1529	Cum	1	219.80	1.20	0.025	6.59
	Kudroli Road MH 1657 to O 32	Cum	1	100.70	1.20	0.025	3.02
	18111 1037 10 0 32	Cuiii		100.70	1.20	0.023	3.02
	Zone- 3 (Part- 2)						
	Only for Manhole portion						
	PM Rao Road						
	MH 1157 to 044 Sharayy Cananati Tample Read and Car Street Cross Read	Cum	6	2.00	2.00	0.025	0.60
	Sharavu Ganapati Temple Road and Car Street Cross Road MH 2506 to MH 1725	Cum	18	2.00	2.00	0.025	1.80
	Sharavu Ganapati Temple cross Road		10	2.00	2.00	0.025	1.00
	MH 567 to MH 1932	Cum	2	2.00	2.00	0.025	0.20
	Car Street and Cross Road						
	MH1719 to MH O-27	Cum	20	2.00	2.00	0.025	2.00
	Carstreet Road MH 1231 to O 56	Cum	4	2.00	2.00	0.025	0.40
	VT Road	Cuiii	4	2.00	2.00	0.023	0.40
	MH 1300 to O 53	Cum	20	2.00	2.00	0.025	2.00
	ASR Pai Road						
	MH 1513 to 0 61	Cum	7	2.00	2.00	0.025	0.70
	Car street Road	6		2.00	2.00	0.025	0.60
	MH 1528 to O26 KSR Cross Road	Cum	6	2.00	2.00	0.025	0.60
	MH 1673 to MH 1529	Cum	8	2.00	2.00	0.025	0.80
	Kudroli Road					0.020	
	MH 1657 to O 32	Cum	4	2.00	2.00	0.025	0.40
		ļ					
	For Household Connection- Zone 3 Part 2 (MH = 110 Nos, L=10.5m X 4	Cum	110	10.00	0.60	0.025	16.50
	connections in each manhole) Road width >3m and 50% of length For Household Connection- Zone 3 Part 2 (MH =1 Nos, L=10.5m X 4	 					
	connections in each manhole) - Road width <3m and 50% of length	Cum	1	10.00	0.60	0.025	0.15
				Area (Pi*r*r)		
	Zone- 3 (Part- 2)						
	Ded Manhole top cover Dia 0.60m and base dia 1.2m	Cum	-107		28	0.025	-0.76
	Ded Manhole top cover Dia 0.60m and base dia 1.5m	Cum Cum	-4	0.	28 	0.025 Total	-0.03 127.27
<u> </u>		Cuili				. o.ui	127.27

Sr.No.	Description of Work	UNIT	No	LENGTH	BREADTH	DEPTH	QUANTITY
28	Dewatering for Lowering of water table to creat dry conditions at least upto the bed of the excavation including the cost of material, labour T & P articles & machinery laying sewer line & Manholes as per approved drawings according. to the requirement of the construction of structure. The cost of this work shall be inclusive of disposal of water pumped out at a safe place away from the structure. The dewatering will work till the completion of the structure as per approved drawings ,with all horizontal leads and lifts etc., complete in all respects as per specification and as directed by engineer. During the execution of work enough precaution should be taken by the contractor to ensure that the clear water flows from the delivery pipe of pumps to avoid any settlement of soil during the process. (A s per Data Rate)						
	Zone 3 Part 2 - 2 months x 15 days-	Day s of 8 hours	75.00				75.00
						Total	75.00
29	KSRB 14.6-2 :Providing and laying heavy duty cobble stones 75mm thick interlock pavers, using cement and course sand for manufacture of blocks of approved size, shape and colour with a minimum compressive strength of 281 kg per sqm over 50mm thick sand bed (average thickness) and compacting with plate vibrator having 3 tons compaction force thereby forcing part of sand underneath to come up in between joints, final compaction of paver surface joints into its final level, including cost of materials, labour and HOM of machineries complete as per specifications. PWD (16-17,Pg No.101,SI No.14.7) Zone- 3 (Part- 2)						
	Only for Pipe portion trench						
	Car Street Cross Road						
	MH 569 to O 26	Sqm	1	47.20	1.80		84.96
	For Manhole Area						
	Car Street Cross Road						
	MH 569 to O 26	Sqm	2	2.00	2.00		8.00
	Manhole Cover Deduction			Δrea =	pi *r*r		
	Ded Manhole top cover Dia 0.60m and base dia 1.2m	Sqm	-14		28		-3.96
	Ded Manhole top cover Dia 0.60m and base dia 1.5m	Sqm	-1	0.	28		-0.28
	Harrach ald Compation						
	Household Connection Zone 3 Part 2						
	For Household Connection- Zone 3 Part 1 (MH = 11Nos, L=5m X 4	Sqm	11	10.00	0.60		66.00
	connections in each manhole)-Road Width >3m and 50% of length For Household Connection- Zone 3 Part 1 (MH = 4Nos, L=5m X 4						
	connections in each manhole)-Road width <3m and 50% of length	Sqm	4	10.00	0.60		24.00
		Sqm				Total	178.72
_	UTILITY SHIFTING						
1	Dismantling KSRRB M200-13.2. Dismantling of existing structures like culverts, bridges, retaining walls and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts complete as per specifications. II.By Mechanical Means. MORTH Specification No. 202 KSRRB Pg No.137,SI No.18.21						
	Compound wall - S S Masonry Foundation	Cum	1	60.00	0.6	0.60	21.60
		Cum Cum	1	60.00 60.00	0.45 0.3	0.60	16.20 5.40
	Super structure	Cum	1	60.00	0.3	1.20	16.56
	Culvert - Foundataion	Cum	10	1.50	0.60	1.00	9.00
		Cum	10	1.50	0.60	0.60	5.40
	Total	Cum					74.16
	Total 70% of Qty						51.91

Sr.No.	Description of Work	UNIT	No	LENGTH	BREADTH	DEPTH	QUANTITY
	KSRRB M200-14.2. 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						
2	wherever necessary, sorting the dismantled material, disposal of						
	unserviceable material and stacking the serviceable material with all lifts						
	complete as per specifications. ii) Dismantling brick/Tile work B. In						
	cement mortar. MORTH Specification No. 202						
	KSRRB Pg No.137,SI No.18.23 Compound wall - S S Masonry Foundation	Cum	1	60.00	0.6	0.60	21.60
	, , , , , , , , , , , , , , , , , , , ,	Cum	1	60.00	0.45	0.60	16.20
		Cum	1	60.00	0.3	0.30	5.40
	Super structure	Cum	1	60.00	0.23	1.20	16.56
	Culvert - Foundataion	Cum	10	1.50	0.60	1.00	9.00
		Cum	10	1.50	0.60	0.60	5.40
	Total	Cum					74.16
	Total 30% of Qty						22.25
В	Compound wall						
	KSRB 2-2.1 : Earthwork excavation for foundation of buildings, water						
	supply, sanitary lines and electrical conduits either in pits or in trenches						
	1.5m and above in width, in ordinary soil not exceeding 1.5 m. in depth						
	including dressing the bottom and sides of pits and trenches, stacking						
1	the excavated soil clear from edges of excavation with lead upto 50 m.						
	after breaking of clods complete as per specifications. specification. No.						
	KBS 2.1(a) / 2.3.5						
	KSRRB Pg No.5,SI No.2.3						
	Excavation for compound wall in ordinary soil	Cum	1	60.00	0.95	1.20	68.40
	Total	Cum		00.00	0.00	1.20	68.40
		-					
	KSRB 4-1.1: Providing and laying in position plain cement concrete of						
	mix 1:2:4 with OPC cement @ 240kgs, with 40mm and down size graded						
	granite metal coarse aggregates @0.878cum and fine aggregates @						
2	0.459cum machine mixed, concrete laid in layers not exceeding 15 cms.						
2	thick, well compacted, in foundation, including cost of all materials,						
	labour, HOM of machinery, curing complete as per specifications.						
	Specification No. KBS 4.1, 4.2						
	KSRRB Pg No.12.Sl No.4.1	_					_
	PCC	Cum	1	60.00	0.95	0.15	8.55
	DPC	Cum	1	60.00	0.45	0.08	2.16
	Copping	Cum	1	60.00	0.23	0.08	1.10
	Extra at Pillar top Total	Cum Cum	17	0.45	0.45	0.08	0.28 12.09
	Total	Cum					12.03
	Providing and constructing granite / trap / basalt size stone masonry in						
	foundation with cement mortar 1:6 stone hammerd dressed in courses						
_	not less than 20 cms high, bond stones at two m. apart in each course						
3	including cost of materials, labour, curing complete as per						
	specifications. KBS 5.1.13						
	KSRRB Pg No.254,SI No.34.8.2						
	Size stone masonry at Foundation						
	1st Course	Cum	1	60.00	0.60	0.60	21.60
	2nd Course	Cum	1	60.00	0.45	0.60	16.20
	Plinth	Cum	1	60.00	0.30	0.30	5.40
	Total	Cum					43.20
	Providing & constructing laterite size stone masonry in CM 1:6 including						
	cost and conveyance of all materials curing, etc complete as per						
	specification I.S. 3620 / 1979 having compressive strength not less than						
4	3.5 N/mm2 for saturated dry samples. For super structure in CM 1:6						
	(Cement 45 kgs/M3) (Ground Floor)						
	KSRRB Pg No.267,SI No.37.66.1						
	For Superstrucure wall	Cum	1	60.00	0.23	1.20	16.56
	For Pillars	Cum Cum	17	0.45	0.23	1.20	4.13
		Cum	-17	0.45	0.43	1.20	-2.11
	Deduct Pillars at Wall			U.TJ	0.23	1.20	
	Deduct Pillars at wall Total	Cum					18.58

Sr.No.	Description of Work	UNIT	No	LENGTH	BREADTH	DEPTH	QUANTITY
	KSRB15-3.11 : Providing 20mm thick cement plaster in single coat with						
	cement mortar 1:4, to stone masonry & concrete surface including						
5	rounding off corners wherever required smooth rendering, : Providing						
,	and removing scaffolding, including cost of materials, labour, curing						
	complete as per specifications.						
	KSRRB Pg No.114,SI No.15.19 For supper structure Plastering on both sides	C	1	60.00		2.00	104.00
	For Pillars projections	Sqm Sqm	34	60.00 0.22		3.08	184.80 23.04
	For DPC horizantal portion	Sqm	1	60.00	0.22	3.00	13.20
	Pillar top	Sqm	17	0.45	0.22	0.45	3.44
	Total	Sqm					224.48
	KSRB 15-16.1: Providing and finishing external walls in two coats with						
	waterproof cement paint of approved brand and shade to give an even						
_	shade after throughly brooming the surface to remove all dirt and loose						
6	powdered material, free from mortar drops and other foreign matter						
	cost of materials, labour, complete as per specifications with primer.						
	KSRRB Pg No.118,SI No.15.53.2						
	Total Qty same as above SI No 5	Sqm	1				224.48
	KSRB 2.3: Filling available excavated earth (excluding rock) in sides of						
	foundations upto plinth in layers not exceeding 20cms. In depth,						
7	compacting each deposited layer by ramming after watering with lead						
,	upto 50m. and lift upto 1.5m. including cost of all labour complete as						
	per specifications. Specification No. KBS 2.9						
	KSRRB Pg No.6,SI No.2.1		1				22.00
	Refilling Qty 1/3rd of Excavated Qty	Cum	1				22.80
С	CULVERT						
	KSRB 2-2.1 : Earthwork excavation for foundation of buildings, water						
	supply, sanitary lines and electrical conduits either in pits or in trenches						
	1.5m and above in width, in ordinary soil not exceeding 1.5 m. in depth						
	including dressing the bottom and sides of pits and trenches, stacking						
1	the excavated soil clear from edges of excavation with lead upto 50 m.						
	after breaking of clods complete as per specifications. specification. No.						
	KBS 2.1(a) / 2.3.5						
	KSRB Pg No 5,SI No.2.3						
	For pipe culverts - 300mm dia. excavation for pipe	Cum	5	5.00	0.90	1.45	32.63
	excavation for masonry structure	Cum	10	1.50	0.60	1.45	13.05
	For pipe culverts - 450mm dia.						
	excavation for pipe	Cum	5	5.00	1.05	1.60	42.00
	excavation for masonry structure Total	Cum Cum	10	1.65	0.6	1.60	15.84 103.52
	1000	Cum					103.32
	KSRRB M2900- PCC 1:3:6 in Foundation KSRRB M2900-1. Plain cement						
	concrete 1:3:6 mix with crushed stone aggregate 40 m nominal size						
2	mechanically mixed, placed in foundation and compacted by vibration						
-	including curing complete as per specifications MORTH Specification						
	No. 408						
	KSRB Pg No.253,SI No.34.1 For pipe culverts - 300mm dia.	-					
	PCC for pipe	Cum	5	5.00	0.30	0.15	1.13
	excavation for masonry structure	Cum	10	1.50	0.60	0.15	1.35
	For pipe culverts - 450mm dia. PCC for pipe	C	5	5.00	0.45	0.15	1.69
		Cum Cum	10	1.65	0.43	0.15	1.69
	excavation for masonry structure	Cum				, -	
	excavation for masonry structure Total	Cum					5.65
	Total						5.65
	Total Providing and constructing granite / trap / basalt size stone masonry in						5.65
	Total Providing and constructing granite / trap / basalt size stone masonry in foundation with cement mortar 1:6 stone hammerd dressed in courses						5.65
3	Providing and constructing granite / trap / basalt size stone masonry in foundation with cement mortar 1:6 stone hammerd dressed in courses not less than 20 cms high, bond stones at two m. apart in each course						5.65
3	Providing and constructing granite / trap / basalt size stone masonry in foundation with cement mortar 1:6 stone hammerd dressed in courses not less than 20 cms high, bond stones at two m. apart in each course including cost of materials, labour, curing complete as per						5.65
3	Providing and constructing granite / trap / basalt size stone masonry in foundation with cement mortar 1:6 stone hammerd dressed in courses not less than 20 cms high, bond stones at two m. apart in each course including cost of materials, labour, curing complete as per specifications. KBS 5.1.13						5.65
3	Providing and constructing granite / trap / basalt size stone masonry in foundation with cement mortar 1:6 stone hammerd dressed in courses not less than 20 cms high, bond stones at two m. apart in each course including cost of materials, labour, curing complete as per	Cum	10	1.50	0.60	1.00	
3	Providing and constructing granite / trap / basalt size stone masonry in foundation with cement mortar 1:6 stone hammerd dressed in courses not less than 20 cms high, bond stones at two m. apart in each course including cost of materials, labour, curing complete as per specifications. KBS 5.1.13 KSRB Pg No.254,SI No.34.8.2 For pipe culvert 300mm dia Deduct pipe		10 -10	1.50 0.07	0.60	1.00	9.00
3	Providing and constructing granite / trap / basalt size stone masonry in foundation with cement mortar 1:6 stone hammerd dressed in courses not less than 20 cms high, bond stones at two m. apart in each course including cost of materials, labour, curing complete as per specifications. KBS 5.1.13 KSRB Pg No.254,SI No.34.8.2 For pipe culvert 300mm dia Deduct pipe For pipe culvert 450mm dia	Cum		0.07 1.65	0.60	1.00	9.00 -0.71
3	Providing and constructing granite / trap / basalt size stone masonry in foundation with cement mortar 1:6 stone hammerd dressed in courses not less than 20 cms high, bond stones at two m. apart in each course including cost of materials, labour, curing complete as per specifications. KBS 5.1.13 KSRB Pg No.254,SI No.34.8.2 For pipe culvert 300mm dia Deduct pipe	Cum Cum Cum	-10	0.07			9.00 -0.71 9.90 -1.59

Sr.No.	Description of Work	UNIT	No	LENGTH	BREADTH	DEPTH	QUANTITY
	Providing and constructing granite / trap / basalt size stone masonry						
	in basement with cement mortar 1:6, edges of stones chistle dressed						
4	in courses not less than 15 cms high, bond stones at two m. apart in						
7	each course including cost of materials, labour, curing complete as per						
	specifications.						
	KSRB Pg No.254,SI No.34.9 For pipe culvert 300mm dia	Cum	10	1.50	0.60	0.60	5.40
	For pipe culvert 450mm dia	Cum	10	1.65	0.60	0.60	5.94
	Total	Cum					11.34
	Providing flush pointing to square rubble, course or uncoursed stone						
	masonry with cement mortar, 20mm deep, after raking joints to depth						
5	of 20mm nicely lining, including cost of materials, labour, curing						
Э	complete as per specifications.						
	– do – cement mortar 1:4						
	KSRB Pg No.254,Sl No.34.12.1						
	For pipe culvert 300mm dia	Sqm	20	1.50		0.60	18.00
	For pipe culvert 450mm dia	Sqm	20	1.65		0.60	19.80
	Total	Sqm					37.80
	Providing and laying reinforced cement concrete pipe NP3 for culverts						
	including pointing ends, and fixing collars with cement mortar 1:2						
6	including cost of all materials, labour, curing complete as per						
U	specifications. Specifications. No. KSRB 1000, 2300 MOST Specification						
	No.1000 / 2300 300mm. dia						
	KSRB Pg No.253,Sl No.34.6.1						
	for 300mm dia Total	Rmt Rmt	5	5.00			25.00
	Total	KIIIL					25.00
	Providing and laying reinforced cement concrete pipe NP3 for culverts						
	including pointing ends, and fixing collars with cement mortar 1:2						
7	including cost of all materials, labour, curing complete as per						
,	specifications. Specifications. No. KSRB 1000, 2300 MOST Specification						
	No.1000 / 2300 450mm. dia						
	KSRB Pg No.253,SI No.34.6.2	Dont	-	F 00			25.00
	for 450mm dia Total	Rmt Rmt	5	5.00			25.00 25.00
	Total	Kille					25.00
	KSRB 2.3: Filling available excavated earth (excluding rock) in sides of						
	foundations upto plinth in layers not exceeding 20cms. In depth,						
8	compacting each deposited layer by ramming after watering with lead						
	upto 50m. and lift upto 1.5m. including cost of all labour complete as						
	per specifications. Specification No. KBS 2.9 KSRB Pg No.6,SI No.2.10						
	1/3 of total excavation	Cum	1				34.51
D	RCC DRAINS						
	Earthwork excavation for foundation of buildings, water supply,						
	sanitary lines and electrical conduits either in pits or in trenches 1.5m						
	and above in width, in Ordinary Soil not exeeding 1.5 m.in depth						
	including dressing the bottom and sides of pits and trenches, stacking						
	the excavated soil clear from edges of excavation with lead upto 50 m						
1	after breaking of clods complete as per specifications including clearing						
	vegetation, shoring, strutting, dewatering if required, and ramming with						
	selected earth for foundation and disposing off excess excavated						
	material as approved by Engineer etc. complete with all lead and lift						
	including danger lighting wherever necessary as directed in the following strata.						
	KSRB Pg No.5,SI No.2.3						
	In ordinary soil	Cum	1	180.00	0.85	0.53	80.33
	Extra for filter media	Cum	180	0.30	0.30	0.30	4.86
	Total	Cum					85.19
			1	I			1

Sr.No.	Description of Work	UNIT	No	LENGTH	BREADTH	DEPTH	QUANTITY
2	Providing and laying in position plain cement concrete of mix 1:2:4 with OPC cement @ 240kgs, with 40mm and down size graded granite metal coarse aggregates @0.878cum and fine aggregates @0.459cum machine mixed, concrete laid in layers not exceeding 15 cms thick, well compacted in foundation, plinth and cills, including cost of all materials, labour, HOM of machineries, curing complete as per specifications. KSRB Pg No 12,SI No.4.1						
	PCC For raft	Cum	1	90.00	0.85	0.08	5.74
	Total	Cum					5.74
3	Providing and laying in position reinforced cement concrete of design mix M25 with OPC cement @ 340kgs, with 20mm and down size graded granite metal coarse aggregates @0.70 cum and fine aggregates @0.47cum, with super plasticisers @ 3 liters conforming to IS 9103-1999 reafirmed-2008 at machine mixed, concrete laid in layers not exceeding 15 cms thick, vibrated for all works in foundation for footings, pedestrals, retaining walls, returnwalls, walls (any thickness) including attached pilasters, columnspillars, posts, struts, buttresses, bed blocks, anchor blocks & plinths etc including cost of all materials, labour, HOM of machinery, curing, complete but excluding cost of reinforcement as per specifications. KSRB Pg No.13,SI NO.4.10						
	For raft	Cum	1	90.00	0.70	0.10	6.30
	For side wall	Cum	2	90.00	0.10	0.60	10.80
	For Precast cover slabs	Cum	60	0.50	0.50	0.10	1.50
	Total	Cum					18.60
4	Providing TMT steel reinforcement for R.C.C work including straightening, cutting, bending, hooking, placing in position, lapping and / or welding wherever required, tying with binding wire and anchoring to the adjoining members wherever necessary complete as per design (laps and wastage shall not be measured and paid) cost of materials, labour, HOM of machinery complete with all lead lifts and as per specifications and direction of Engineer-in-Charge. FE 500 KSRB Pg No.17,SI No.4.46.2 Rev.	Gun					10.50
	Total concrete	Cum	1				18.60
	Reinforcement TMT 100kg/ cum	Kg	1				1860.00
	Total	MT					1.86
5	Providing and removing, centering, shuttering, strutting, propping etc., and removal of form work for foundations, footings, bases of columns for mass concrete including cost of all materials, labour complete as per specifications. KSRB Pg No.15,SI No.4.28						
	For PCC sides	Sqm	2	90.00		0.08	13.50
	For raft sides	Sqm	2	90.00		0.10	18.00
	Total	Sqm					31.50
6	Providing and removing centering, shuttering, strutting, propping etc., and removal of form work for vertical surface such as walls at any thickness, including attached pilasters, buttresses plinth cills and string courses cost of all materials, labour complete as per specifications. KSRB Pg No.15,SI No.4.31		-				
	For side wall Total	Sqm	4	90.00		0.60	216.00 216.00
	iotai	Sqm					216.00
	Providing and removing centering, shuttering, strutting, propping etc., and removal of form work for flat surface such as roofs, landings, balconies and likes, thickness upto 200mm including cost of all						
7	materials, labour complete as per specification. (Ground floor) KSRB,Pg No.15,SI No.4.18 For Cover slab	Sam	1	0.50	0.50		N 25
7	KSRB,Pg No.15,SI No.4.18 For Cover slab	Sqm Sqm	1 2	0.50 0.50	0.50	0.10	0.25
7	KSRB,Pg No.15,SI No.4.18	Sqm Sqm Sqm	1 2 2	0.50 0.50 0.50	0.50	0.10 0.10	0.25 0.10 0.10
7	KSRB,Pg No.15,SI No.4.18 For Cover slab	Sqm	2	0.50	0.50		0.10
7	KSRB,Pg No.15,SI No.4.18 For Cover slab Slab side	Sqm	2	0.50	0.50		0.10 0.10

Sr.No.	Description of Work	UNIT	No	LENGTH	BREADTH	DEPTH	QUANTITY
8	KSRRB M2200 - Providing Weep holes Providing weep holes in Brick masonry / Plain / Reinforced concrete abutment, wing wall / return wall with PVC 90mm outer dia pipe 2 kg / Sqcm, extending through the full width of the structure with slope of 1V:20H towards drawing force complete as per drawing and Technical specifications complete as per specifications. KSRB,Pg No.225,SI No.28.10						
		Rmt	90	0.10			9.00
	Total	Rmt					9.00
9	Providing and laying of filter media with granular materials/stone crushed aggrigates satisfying the requirement laid down in clause 2500.4.2.2 of morth specification to a thickness not less than 600 mm with smaller size to wards the soil and bigger size towards the wall and provided over the entire surface behind the abutment,wing wall and return wall to full hight compacted to afirm condition complete as per drawing and technical specification KSRB,Pg No.225,SI No.28.13 For filter media. Total	Cum Cum	90	0.30	0.30	0.30	2.43 2.43
10	KSRB 2.3: Filling available excavated earth (excluding rock) in sides of foundations upto plinth in layers not exceeding 20cms. In depth, compacting each deposited layer by ramming after watering with lead upto 50m. and lift upto 1.5m. including cost of all labour complete as per specifications. Specification No. KBS 2.9 KSRB Pg No.6,SI No.2.10						
	Total excavation	Cum	1				85.19
	Deduct PCC	Cum	-1				-5.74
	Raft	Cum	-1				-17.10
	Drain Volume	Cum	-1	90.00	0.50	0.50	-22.50
	Total	Cum					39.85

Executive Engineer MSCL Mangaluru

MANGALURU SMART CITY

1.7 Measurement Sheet of UNDERGROUND DRAINAGE Zone 3 Part 2

RCC inspection chamber (Sewer line)

Item No	RA Ref. No	Descriptions	Unit	No	Length (m)	Breadth (m)	Depth (m)	Quantity	Rate (Rs)	Amount (Rs)	Remarks
1.0	1	Earthwork excavation for foundation of buildings, culverts, water supply, sanitary lines and electrical conduits either in pits or in trenches in ordinary soil including dressing the bottom and sides of pits and trenches, stacking the excavated soil clear from edges of excavation with all lead and lift after breaking of clods complete as per specifications, as per direction of Engineer etc., complete by manual means	Cum								
		A= (3.142*(.8+.1 +.1)^2)/4		1	0.79		0.79	0.62			
			Cum				Total	0.62		i	
			Cum				Say	0.70	211.68	148.18	
		Providing and laying in position plain cement concrete M15 grade with									
2	2	granite graded metal of 20 mm and down size and clean sieved river sand for foundation and levelling course, machine mixed, concrete laid, well compacted, including cost and conveyance	Cum								
			Cum	1	0.79		0.10	0.08		i	
					•		Total	0.08			
			Cum				Say	0.10	6,093.92	609.39	
3	3	Providing and laying in position reinforced cement concrete of design mix M25 with OPC cement @ 340kgs, with 20mm and down size graded granite metal coarse aggregates @0.70 cum and fine aggregates @0.47cum, with super plasticisers @ 3 liters conforming to IS 9103-1999 reafirmed-2008 at machine mixed, concrete laid in layers not exceeding 15 cms thick, vibrated for all works in foundation for footings, pedestrals, retaining walls, returnwalls, walls (any thickness) including attached pilasters, columnspillars, posts, struts, buttresses, bed blocks, anchor blocks & plinths etc including cost of all materials, labour, HOM of machinery, curing, complete but excluding cost of reinforcement as per specifications.	Cum								
	1	Foundation Raft	Cum	1	0.50		0.15	0.08			
	2	Walls		1	2.20	0.10	0.60	0.13			
				1	2.51	0.10	0.10	0.03			
			Cum				Total	0.23			
			Cum				Say	0.25	6,967.52	1,741.88	

		To the 161 to the control of the con	1		T T		ı	ı	ı	1
		Providing and fabricating TMT Steel reinforcement bars of Fe-500 grade								
		including straightening the bars, cutting, bending, hooking and placing in								
		position, lapping and or welding wherever required, tying with binding								
		wire, anchoring to the adjoining members wherever necessary as per								
		approved design and drawings including cost and conveyance of all								
4	4	materials with all leads and lifts, loading and unloading, all labour, hire	MT							
		charges of machineries, T&P, etc. complete and all other incidental items								
		of works required for successful completion of the work as per approved								
		drawings, specifications and as directed by the Engineer-in-charge. (Laps,								
		hooks, chairs and wastages will not be measured and will not be paid fo	r							
		separately.)	-							
			MT	1	0.23		0.015			
			MT		0.20	Say	0.015	67,879.84	1,018.20	
							0.025	07,073.0.	1,010.20	
		Providing and removing, centering, shuttering, strutting, propping etc and							-	
5	5	removal of form work for foundations, bases of columns for mass concret	Sqm							
3		including cost of all materials, labour complete as per specifications	Jqiii							
				1	2.54	0.15	0.20			
		For raft	C	1	2.51	0.15	0.38		-	
			Sqm		1	Total	0.38	250.72	-	
			Sqm		+	Say	0.40	258.72	103.49	
		Providing and removing centering, shuttering, strutting, propping etc., and			+					
		removal of form work for vertical surfaces such as walls of any thickness	1							
6	6	including cost of all materials, labour complete as per specification.	Sqm							
		including cost of all materials, labour complete as per specification.								
		Outer wall	Sqm	1	2.51	0.60	1.51		_	
		Inner wall	Sqm	1	1.89	0.60	1.13			
		top edge outer	Sqm	1	2.83	0.10	0.28			
		top edge outer	Sqm	1	2.20	0.10	0.23		-	
		top eage iiiiei	Sqm		2.20	Total	3.14		_	
			Sqm			Say	3.20	328.16	1,050.11	
			Jqiii		+	Jay	3.20	328.10	1,030.11	
		Refilling pipeline trenches and foundation with selected available earth								
		from trench excavation and foundation including watering, consolidation i	n							
7	7	layers of 15 cms., thickness including disposing off the surplus earth with								
		all lead and lift, Including environmental and social safe guards, including								
		all taxes, as directed by the Engineer-in-Charge etc., complete.								
		Total Excavation	Cum	1	† †		0.62			
		Deduct PCC	Cum	Ì			-0.08			
		Deduct Raft			 		-0.08			
		Deduct Chamber	Cum	-1	0.50	0.70	-0.35			
		Sedde ondinger	Cum		0.50	Total	0.11			
			Cum	1	† †	Say	0.20	66.08	13.22	
						1	5.20	22.00	10.22	
8	8	Supply and fixing SFRC manhole cover and frame (heavy duty) confirming	Nos	1			1.00	1,952.50	1,952.50	
		to IS :12592 with latest ammendments	1405		<u> </u>		1.00	1,332.30	1,332.30	
								Total	6,636.96	
								Say	6,637.00	
	1	1	_1	1	1	ı		1	.,	

Executive Engineer MSCL Mangaluru

GM Technical MSCL Mangaluru

MANGALURU SMART CITY 1.5 Rate Analysis of Underground Drainage Zone 3 Part 2

RATE ANALYSIS - UnderGround Drainage Zone3 Part 2

	KCDDD200 0 Classics and such bis a sead land in the discount	iprooting rank vegetation, grass, brush, sungle, removal of stumps, disposal of un		
	[KSKRB200-8. Clearing and grubbing road land including u	ungle, removal of stumps, disposal of un	serviceable mate	erials,
	of girth upto 300mm, by manual means, in area of light j			,
1	stacking of serviceable materials labour charges complet			
		e as per specifications		
	KSRB Pg No.136,SI No.18.11			
	Basic rate		6.00	
	Add 12% For area weightage		0.72	
		Rate	6.72	Sqm
		1.000	0.72	
	Cutting applied wood curfors for singling translag and di	anasing off the everyated stuff with all le	and and lift as div	rostod
	Cutting asphalt road surface for pipeline trenches and di	sposing off the excavated stuff with an is	eau anu int as un	ecteu
2	including barricading, danger lighting etc.,			
	KUWSDB-15-16 SI No.5.2,Pg No.17			
	Basic rate		578	
	Add 12% For area weightage		69.36	
		Rate	647.36	Cum
		nate	047.30	Cuiii
			11. 1. 11.6	
	Cutting Concrete road surface for pipeline trenches and	disposing off the excavated stuff with all	lead and lift as o	directed
3	including barricading,danger lighting etc.,			
	KUWSDB-15-16 SI No.5.3,Pg No.17			
	Basic rate		1159	
	Add 12% For area weightage		139.08	C
		Rate	1298.08	Cum
4	Taking out existing CC interlocking paver blocks from foo unserviceable material to the dumping ground, for which	n payment shall be made separately and		
	material within 50 metre lead as per direction of Enginee			
	·	er-in-Charge.(As per Data Rate)		
	Basic rate	er-in-Charge.(As per Data Rate)	36.83	
				Sam
5		Rate ing work) including barricading depositirg rods including shoring, strutting, bailing	36.83 ng on bank with a	all lead
5	Basic rate Earthwork excavation for pipeline trenches (Except build including danger lighting and using sight rails and boning	Rate ing work) including barricading depositirg rods including shoring, strutting, bailing	36.83 ng on bank with a	all lead
	Earthwork excavation for pipeline trenches (Except build including danger lighting and using sight rails and boning meters wherever neccessary as directed in the following	Rate ing work) including barricading depositir g rods including shoring,strutting,bailing Strata	36.83 ng on bank with a out water at eve	all lead
i	Earthwork excavation for pipeline trenches (Except build including danger lighting and using sight rails and boning meters wherever neccessary as directed in the following KUWSDB SR 15-16,SI No 1,Pg No 5	Rate ing work) including barricading depositir g rods including shoring,strutting,bailing Strata	36.83 ng on bank with a out water at eve	all lead
i	Earthwork excavation for pipeline trenches (Except build including danger lighting and using sight rails and boning meters wherever neccessary as directed in the following KUWSDB SR 15-16,SI No 1,Pg No 5 do in all soils mixed mixed with boulders of 30 cms size u 0 to 2mtr depth	Rate ing work) including barricading depositir g rods including shoring,strutting,bailing Strata	36.83 ng on bank with a out water at eve 182	all lead
i	Basic rate Earthwork excavation for pipeline trenches (Except build including danger lighting and using sight rails and boning meters wherever neccessary as directed in the following KUWSDB SR 15-16,SI No 1,Pg No 5 do in all soils mixed mixed with boulders of 30 cms size u O to 2mtr depth Basic rate	Rate ing work) including barricading depositir g rods including shoring,strutting,bailing Strata	36.83 ng on bank with a out water at even	all lead
i	Earthwork excavation for pipeline trenches (Except build including danger lighting and using sight rails and boning meters wherever neccessary as directed in the following KUWSDB SR 15-16,SI No 1,Pg No 5 do in all soils mixed mixed with boulders of 30 cms size u 0 to 2mtr depth	Rate ing work) including barricading depositing rods including shoring, strutting, bailing Strata upto an exclusive of disintegrated rock D2	36.83 ng on bank with a out water at even 182 175.00 21.00	all lead ery 100
i a	Earthwork excavation for pipeline trenches (Except build including danger lighting and using sight rails and boning meters wherever neccessary as directed in the following KUWSDB SR 15-16,SI No 1,Pg No 5 do in all soils mixed mixed with boulders of 30 cms size u 0 to 2mtr depth Basic rate Add 12% For area weightage	Rate ing work) including barricading depositir g rods including shoring,strutting,bailing Strata	36.83 ng on bank with a out water at even	all lead ery 100
i a	Earthwork excavation for pipeline trenches (Except build including danger lighting and using sight rails and boning meters wherever neccessary as directed in the following KUWSDB SR 15-16,SI No 1,Pg No 5 do in all soils mixed mixed with boulders of 30 cms size u 0 to 2mtr depth Basic rate Add 12% For area weightage 2 to 4mtr depth	Rate ing work) including barricading depositing rods including shoring, strutting, bailing Strata upto an exclusive of disintegrated rock D2	36.83 ng on bank with a out water at even 182 175.00 21.00 196.00	all lead ery 100
i a	Earthwork excavation for pipeline trenches (Except build including danger lighting and using sight rails and boning meters wherever neccessary as directed in the following KUWSDB SR 15-16,SI No 1,Pg No 5 do in all soils mixed mixed with boulders of 30 cms size u 0 to 2mtr depth Basic rate Add 12% For area weightage 2 to 4mtr depth Basic rate	Rate ing work) including barricading depositing rods including shoring, strutting, bailing Strata upto an exclusive of disintegrated rock D2	36.83 ng on bank with a out water at even 182 175.00 21.00 196.00	all lead ery 100
i a	Earthwork excavation for pipeline trenches (Except build including danger lighting and using sight rails and boning meters wherever neccessary as directed in the following KUWSDB SR 15-16,SI No 1,Pg No 5 do in all soils mixed mixed with boulders of 30 cms size u 0 to 2mtr depth Basic rate Add 12% For area weightage 2 to 4mtr depth	Rate ing work) including barricading depositing rods including shoring, strutting, bailing Strata upto an exclusive of disintegrated rock D2	36.83 ng on bank with a out water at even 182 175.00 21.00 196.00	all lead ery 100
i a	Earthwork excavation for pipeline trenches (Except build including danger lighting and using sight rails and boning meters wherever neccessary as directed in the following KUWSDB SR 15-16,SI No 1,Pg No 5 do in all soils mixed mixed with boulders of 30 cms size u 0 to 2mtr depth Basic rate Add 12% For area weightage 2 to 4mtr depth Basic rate	Rate ing work) including barricading depositing rods including shoring, strutting, bailing Strata upto an exclusive of disintegrated rock D2	36.83 ng on bank with a out water at even 182 175.00 21.00 196.00	all lead ery 100
i a	Earthwork excavation for pipeline trenches (Except build including danger lighting and using sight rails and boning meters wherever neccessary as directed in the following KUWSDB SR 15-16,SI No 1,Pg No 5 do in all soils mixed mixed with boulders of 30 cms size u 0 to 2mtr depth Basic rate Add 12% For area weightage 2 to 4mtr depth Basic rate	Rate ing work) including barricading depositing rods including shoring, strutting, bailing Strata upto an exclusive of disintegrated rock D2 Rate	36.83 Ing on bank with a out water at ever 182 175.00 21.00 196.00 232.00 27.84	all lead ery 100
i a	Earthwork excavation for pipeline trenches (Except build including danger lighting and using sight rails and boning meters wherever neccessary as directed in the following KUWSDB SR 15-16,SI No 1,Pg No 5 do in all soils mixed mixed with boulders of 30 cms size u 0 to 2mtr depth Basic rate Add 12% For area weightage 2 to 4mtr depth Basic rate Add 12% For area weightage	Rate ing work) including barricading depositing rods including shoring, strutting, bailing Strata upto an exclusive of disintegrated rock D2 Rate Rate	182 175.00 21.00 196.00 232.00 27.84 259.84	cum
i a	Earthwork excavation for pipeline trenches (Except build including danger lighting and using sight rails and boning meters wherever neccessary as directed in the following KUWSDB SR 15-16,SI No 1,Pg No 5 do in all soils mixed mixed with boulders of 30 cms size u 0 to 2mtr depth Basic rate Add 12% For area weightage 2 to 4mtr depth Basic rate Add 12% For area weightage Earthwork excavation for pipeline trenches (Except build	Rate ing work) including barricading depositing rods including shoring, strutting, bailing Strata upto an exclusive of disintegrated rock D2 Rate Rate ing work) including barricading depositing	182 175.00 21.00 196.00 232.00 27.84 259.84	Cum Cum
i a b	Earthwork excavation for pipeline trenches (Except build including danger lighting and using sight rails and boning meters wherever neccessary as directed in the following KUWSDB SR 15-16,SI No 1,Pg No 5 do in all soils mixed mixed with boulders of 30 cms size u 0 to 2mtr depth Basic rate Add 12% For area weightage 2 to 4mtr depth Basic rate Add 12% For area weightage Earthwork excavation for pipeline trenches (Except build including danger lighting and using sight rails and boning	Rate ing work) including barricading depositing rods including shoring, strutting, bailing Strata upto an exclusive of disintegrated rock D2 Rate Rate ing work) including barricading depositing rods including shoring, strutting, bailing	182 175.00 21.00 196.00 232.00 27.84 259.84	Cum Cum
i a b	Earthwork excavation for pipeline trenches (Except build including danger lighting and using sight rails and boning meters wherever neccessary as directed in the following KUWSDB SR 15-16,SI No 1,Pg No 5 do in all soils mixed mixed with boulders of 30 cms size u 0 to 2mtr depth Basic rate Add 12% For area weightage 2 to 4mtr depth Basic rate Add 12% For area weightage Earthwork excavation for pipeline trenches (Except build including danger lighting and using sight rails and boning meters wherever neccessary as directed in the following	Rate ing work) including barricading depositing rods including shoring, strutting, bailing Strata upto an exclusive of disintegrated rock D2 Rate Rate ing work) including barricading depositing rods including shoring, strutting, bailing	182 175.00 21.00 196.00 232.00 27.84 259.84	Cum Cum
i a b	Earthwork excavation for pipeline trenches (Except build including danger lighting and using sight rails and boning meters wherever neccessary as directed in the following KUWSDB SR 15-16,SI No 1,Pg No 5 do in all soils mixed mixed with boulders of 30 cms size u 0 to 2mtr depth Basic rate Add 12% For area weightage 2 to 4mtr depth Basic rate Add 12% For area weightage Earthwork excavation for pipeline trenches (Except build including danger lighting and using sight rails and boning	Rate ing work) including barricading depositing rods including shoring, strutting, bailing Strata upto an exclusive of disintegrated rock D2 Rate Rate ing work) including barricading depositing rods including shoring, strutting, bailing	182 175.00 21.00 196.00 232.00 27.84 259.84	Cum Cum
i a b	Earthwork excavation for pipeline trenches (Except build including danger lighting and using sight rails and boning meters wherever neccessary as directed in the following KUWSDB SR 15-16,SI No 1,Pg No 5 do in all soils mixed mixed with boulders of 30 cms size u 0 to 2mtr depth Basic rate Add 12% For area weightage 2 to 4mtr depth Basic rate Add 12% For area weightage Earthwork excavation for pipeline trenches (Except build including danger lighting and using sight rails and boning meters wherever neccessary as directed in the following KUWSDB SR 15-16,SI No 1-ii-(a),Pg No 5	Rate ing work) including barricading depositing rods including shoring, strutting, bailing Strata pto an exclusive of disintegrated rock D: Rate Rate ing work) including barricading depositing rods including shoring, strutting, bailing Strata	182 175.00 21.00 196.00 232.00 27.84 259.84 and on bank with a out water at every series out out water at every series out water at every series out out out out out water at every series out	Cum Cum Cum Cum
i a b	Earthwork excavation for pipeline trenches (Except build including danger lighting and using sight rails and boning meters wherever neccessary as directed in the following KUWSDB SR 15-16,SI No 1,Pg No 5 do in all soils mixed mixed with boulders of 30 cms size u 0 to 2mtr depth Basic rate Add 12% For area weightage 2 to 4mtr depth Basic rate Add 12% For area weightage Earthwork excavation for pipeline trenches (Except build including danger lighting and using sight rails and boning meters wherever neccessary as directed in the following KUWSDB SR 15-16,SI No 1-ii-(a),Pg No 5 In disintegrated rock, soft rock, soft shale, medium hard	Rate ing work) including barricading depositing rods including shoring, strutting, bailing Strata pto an exclusive of disintegrated rock D: Rate Rate ing work) including barricading depositing rods including shoring, strutting, bailing Strata	182 175.00 21.00 196.00 232.00 27.84 259.84 and on bank with a out water at every series out out water at every series out water at every series out out out out out water at every series out	Cum Cum Cum Cum
i a b	Earthwork excavation for pipeline trenches (Except build including danger lighting and using sight rails and boning meters wherever neccessary as directed in the following KUWSDB SR 15-16,SI No 1,Pg No 5 do in all soils mixed mixed with boulders of 30 cms size u 0 to 2mtr depth Basic rate Add 12% For area weightage 2 to 4mtr depth Basic rate Add 12% For area weightage Earthwork excavation for pipeline trenches (Except build including danger lighting and using sight rails and boning meters wherever neccessary as directed in the following KUWSDB SR 15-16,SI No 1-ii-(a),Pg No 5 In disintegrated rock, soft rock, soft shale, medium hard fissured rock without resorting to blasting	Rate ing work) including barricading depositing rods including shoring, strutting, bailing Strata pto an exclusive of disintegrated rock D: Rate Rate ing work) including barricading depositing rods including shoring, strutting, bailing Strata	182 175.00 21.00 196.00 232.00 27.84 259.84 ang on bank with a out water at every series out out water at every series out water at every series out out out out out water at every series out	Cum Cum Cum Cum
i a b	Earthwork excavation for pipeline trenches (Except build including danger lighting and using sight rails and boning meters wherever neccessary as directed in the following KUWSDB SR 15-16,SI No 1,Pg No 5 do in all soils mixed mixed with boulders of 30 cms size u 0 to 2mtr depth Basic rate Add 12% For area weightage 2 to 4mtr depth Basic rate Add 12% For area weightage Earthwork excavation for pipeline trenches (Except build including danger lighting and using sight rails and boning meters wherever neccessary as directed in the following KUWSDB SR 15-16,SI No 1-ii-(a),Pg No 5 In disintegrated rock, soft rock, soft shale, medium hard fissured rock without resorting to blasting 0 to 2mtr depth	Rate ing work) including barricading depositing rods including shoring, strutting, bailing Strata pto an exclusive of disintegrated rock D: Rate Rate ing work) including barricading depositing rods including shoring, strutting, bailing Strata	36.83 Ing on bank with a out water at ever 182 175.00 21.00 196.00 232.00 27.84 259.84 Ing on bank with a out water at ever 188	Cum Cum Cum Cum
i a b	Earthwork excavation for pipeline trenches (Except build including danger lighting and using sight rails and boning meters wherever neccessary as directed in the following KUWSDB SR 15-16,SI No 1,Pg No 5 do in all soils mixed mixed with boulders of 30 cms size u 0 to 2mtr depth Basic rate Add 12% For area weightage 2 to 4mtr depth Basic rate Add 12% For area weightage Earthwork excavation for pipeline trenches (Except build including danger lighting and using sight rails and boning meters wherever neccessary as directed in the following KUWSDB SR 15-16,SI No 1-ii-(a),Pg No 5 In disintegrated rock, soft rock, soft shale, medium hard fissured rock without resorting to blasting 0 to 2mtr depth Basic rate	Rate ing work) including barricading depositing rods including shoring, strutting, bailing Strata pto an exclusive of disintegrated rock D: Rate Rate ing work) including barricading depositing rods including shoring, strutting, bailing Strata	36.83 Ing on bank with a out water at ever 182 175.00 21.00 196.00 232.00 27.84 259.84 Ing on bank with a out water at ever 189.86 Ing on bank with a out water at ever 189.86	Cum Cum Cum Cum
i a b	Earthwork excavation for pipeline trenches (Except build including danger lighting and using sight rails and boning meters wherever neccessary as directed in the following KUWSDB SR 15-16,SI No 1,Pg No 5 do in all soils mixed mixed with boulders of 30 cms size u 0 to 2mtr depth Basic rate Add 12% For area weightage 2 to 4mtr depth Basic rate Add 12% For area weightage Earthwork excavation for pipeline trenches (Except build including danger lighting and using sight rails and boning meters wherever neccessary as directed in the following KUWSDB SR 15-16,SI No 1-ii-(a),Pg No 5 In disintegrated rock, soft rock, soft shale, medium hard fissured rock without resorting to blasting 0 to 2mtr depth	Rate ing work) including barricading depositing rods including shoring, strutting, bailing Strata pto an exclusive of disintegrated rock D: Rate Rate ing work) including barricading depositing rods including shoring, strutting, bailing Strata	36.83 Ing on bank with a out water at ever 182 175.00 21.00 196.00 232.00 27.84 259.84 Ing on bank with a out water at ever 188	Cum Cum Cum Cum
i a b	Earthwork excavation for pipeline trenches (Except build including danger lighting and using sight rails and boning meters wherever neccessary as directed in the following KUWSDB SR 15-16,SI No 1,Pg No 5 do in all soils mixed mixed with boulders of 30 cms size u 0 to 2mtr depth Basic rate Add 12% For area weightage 2 to 4mtr depth Basic rate Add 12% For area weightage Earthwork excavation for pipeline trenches (Except build including danger lighting and using sight rails and boning meters wherever neccessary as directed in the following KUWSDB SR 15-16,SI No 1-ii-(a),Pg No 5 In disintegrated rock, soft rock, soft shale, medium hard fissured rock without resorting to blasting 0 to 2mtr depth Basic rate	Rate ing work) including barricading depositing rods including shoring, strutting, bailing Strata pto an exclusive of disintegrated rock D: Rate Rate ing work) including barricading depositing rods including shoring, strutting, bailing Strata	36.83 Ing on bank with a out water at ever 182 175.00 21.00 196.00 232.00 27.84 259.84 Ing on bank with a out water at ever 189.86 Ing on bank with a out water at ever 189.86	Cum Cum all lead ery 100
i a b	Earthwork excavation for pipeline trenches (Except build including danger lighting and using sight rails and boning meters wherever neccessary as directed in the following KUWSDB SR 15-16,SI No 1,Pg No 5 do in all soils mixed mixed with boulders of 30 cms size u 0 to 2mtr depth Basic rate Add 12% For area weightage 2 to 4mtr depth Basic rate Add 12% For area weightage Earthwork excavation for pipeline trenches (Except build including danger lighting and using sight rails and boning meters wherever neccessary as directed in the following KUWSDB SR 15-16,SI No 1-ii-(a),Pg No 5 In disintegrated rock, soft rock, soft shale, medium hard fissured rock without resorting to blasting 0 to 2mtr depth Basic rate Add 12% For area weightage	Rate ing work) including barricading depositing grods including shoring, strutting, bailing Strata pto an exclusive of disintegrated rock D: Rate Rate ing work) including barricading depositing grods including shoring, strutting, bailing Strata rock comprising of lime stone, sand store	36.83 Ing on bank with a out water at ever 182 175.00 21.00 196.00 232.00 27.84 259.84 Ing on bank with a out water at ever 182 Ine, hard shale, so 182 395.00 47.4	Cum Cum all lead ery 100
i a b	Earthwork excavation for pipeline trenches (Except build including danger lighting and using sight rails and boning meters wherever neccessary as directed in the following KUWSDB SR 15-16,SI No 1,Pg No 5 do in all soils mixed mixed with boulders of 30 cms size u 0 to 2mtr depth Basic rate Add 12% For area weightage 2 to 4mtr depth Basic rate Add 12% For area weightage Earthwork excavation for pipeline trenches (Except build including danger lighting and using sight rails and boning meters wherever neccessary as directed in the following KUWSDB SR 15-16,SI No 1-ii-(a),Pg No 5 In disintegrated rock, soft rock, soft shale, medium hard fissured rock without resorting to blasting 0 to 2mtr depth Basic rate Add 12% For area weightage 2 to 4mtr depth	Rate ing work) including barricading depositing grods including shoring, strutting, bailing Strata pto an exclusive of disintegrated rock D: Rate Rate ing work) including barricading depositing grods including shoring, strutting, bailing Strata rock comprising of lime stone, sand store	36.83 Ing on bank with a out water at every series and shale, so series	Cum Cum all lead ery 100
5 i a b	Earthwork excavation for pipeline trenches (Except build including danger lighting and using sight rails and boning meters wherever neccessary as directed in the following KUWSDB SR 15-16,SI No 1,Pg No 5 do in all soils mixed mixed with boulders of 30 cms size u 0 to 2mtr depth Basic rate Add 12% For area weightage 2 to 4mtr depth Basic rate Add 12% For area weightage Earthwork excavation for pipeline trenches (Except build including danger lighting and using sight rails and boning meters wherever neccessary as directed in the following KUWSDB SR 15-16,SI No 1-ii-(a),Pg No 5 In disintegrated rock, soft rock, soft shale, medium hard fissured rock without resorting to blasting 0 to 2mtr depth Basic rate Add 12% For area weightage 2 to 4mtr depth Basic rate	Rate ing work) including barricading depositing grods including shoring, strutting, bailing Strata pto an exclusive of disintegrated rock D: Rate Rate ing work) including barricading depositing grods including shoring, strutting, bailing Strata rock comprising of lime stone, sand store	36.83 Ing on bank with a out water at every series and shale, so series	Cum Cum all lead ery 100
i a b 6	Earthwork excavation for pipeline trenches (Except build including danger lighting and using sight rails and boning meters wherever neccessary as directed in the following KUWSDB SR 15-16,SI No 1,Pg No 5 do in all soils mixed mixed with boulders of 30 cms size u 0 to 2mtr depth Basic rate Add 12% For area weightage 2 to 4mtr depth Basic rate Add 12% For area weightage Earthwork excavation for pipeline trenches (Except build including danger lighting and using sight rails and boning meters wherever neccessary as directed in the following KUWSDB SR 15-16,SI No 1-ii-(a),Pg No 5 In disintegrated rock, soft rock, soft shale, medium hard fissured rock without resorting to blasting 0 to 2mtr depth Basic rate Add 12% For area weightage 2 to 4mtr depth	Rate ing work) including barricading depositing grods including shoring, strutting, bailing Strata pto an exclusive of disintegrated rock D: Rate Rate ing work) including barricading depositing grods including shoring, strutting, bailing Strata rock comprising of lime stone, sand store	36.83 Ing on bank with a out water at every series and shale, so series	Cum Cum Cum Cum Cum Cum Cum

	Earthwork excavation for pipeline trenches (Except building wor		-	
7	including danger lighting and using sight rails and boning rods in	cluding shoring, strutting, bailing	out water at eve	ry 100
′	meters wherever neccessary as directed in the following Strata			
	KUWSDB SR 15-16,Sl No 1-iii-(a),Pg No 7			
	In hard laterite rock or hard laterite rock containing iron ore upt	20% by chistelling and trimming	g to proper slope	9
a	0 to 2mtr depth			
	Basic rate		602.00	
	Add 12% For area weightage		72.24	
		Rate	674.24	Cum
b	2 to 4mtr depth	,	'	
	Basic rate		721.00	
	Add 12% For area weightage		86.52	
	5 5	Rate	807.52	Cum
	Earthwork excavation for pipeline trenches (Except building wor	 including barricading depositing 	ig on bank with a	all lead
o	including danger lighting and using sight rails and boning rods in	cluding shoring, strutting, bailing	out water at eve	ry 100
8	meters wherever neccessary as directed in the following Strata			
	KUWSDB SR 15-16,SI No 1-iv-(a),Pg No 7			
	In hard laterite rock containing iron ore above 20% by chistelling	and trimming to proper slope		
a	0 to 2mtr depth	0 1 1 1 1		
<u>~</u>	Basic rate		1277.00	
	Add 12% For area weightage		153.24	
	Add 1270 For area weightage	Rate	1430.24	Cum
		Nate	1430.24	Cuiii
h	2 to Amete double			
b	2 to 4mtr depth		1240 00	
b	Basic rate		1340.00	
b		Bata	160.8	Comm
	Basic rate Add 12% For area weightage Earthwork excavation for pipeline trenches (Except building wor including danger lighting and using sight rails and boning rods in		160.8 1500.80 ag on bank with a	all lead
9	Basic rate Add 12% For area weightage Earthwork excavation for pipeline trenches (Except building wor including danger lighting and using sight rails and boning rods ir meters wherever neccessary as directed in the following Strata KUWSDB SR 15-16,SI No 1-vi-(a),Pg No 9	s) including barricading depositing	160.8 1500.80 ag on bank with a	all lead
9	Basic rate Add 12% For area weightage Earthwork excavation for pipeline trenches (Except building wor including danger lighting and using sight rails and boning rods in meters wherever neccessary as directed in the following Strata KUWSDB SR 15-16,SI No 1-vi-(a),Pg No 9 In hard rock by Controlled blasting	s) including barricading depositing	160.8 1500.80 ag on bank with a	all lead
	Basic rate Add 12% For area weightage Earthwork excavation for pipeline trenches (Except building wor including danger lighting and using sight rails and boning rods ir meters wherever neccessary as directed in the following Strata KUWSDB SR 15-16,SI No 1-vi-(a),Pg No 9 In hard rock by Controlled blasting O to 2mtr depth	s) including barricading depositing	160.8 1500.80 Ig on bank with a out water at eve	all lead
9	Basic rate Add 12% For area weightage Earthwork excavation for pipeline trenches (Except building wor including danger lighting and using sight rails and boning rods ir meters wherever neccessary as directed in the following Strata KUWSDB SR 15-16,SI No 1-vi-(a),Pg No 9 In hard rock by Controlled blasting O to 2mtr depth Basic rate	s) including barricading depositing	160.8 1500.80 ag on bank with a out water at eve	all lead
9	Basic rate Add 12% For area weightage Earthwork excavation for pipeline trenches (Except building wor including danger lighting and using sight rails and boning rods in meters wherever neccessary as directed in the following Strata KUWSDB SR 15-16,SI No 1-vi-(a),Pg No 9 In hard rock by Controlled blasting O to 2mtr depth Basic rate Add	s) including barricading depositing	160.8 1500.80 ag on bank with a out water at eve 884.00 378.00	all lead
9	Basic rate Add 12% For area weightage Earthwork excavation for pipeline trenches (Except building wor including danger lighting and using sight rails and boning rods ir meters wherever neccessary as directed in the following Strata KUWSDB SR 15-16,SI No 1-vi-(a),Pg No 9 In hard rock by Controlled blasting O to 2mtr depth Basic rate	c) including barricading depositin cluding shoring, strutting, bailing	160.8 1500.80 ag on bank with a out water at eve 884.00 378.00 151.44	all lead
9 a	Basic rate Add 12% For area weightage Earthwork excavation for pipeline trenches (Except building wor including danger lighting and using sight rails and boning rods in meters wherever neccessary as directed in the following Strata KUWSDB SR 15-16,SI No 1-vi-(a),Pg No 9 In hard rock by Controlled blasting O to 2mtr depth Basic rate Add Add 12% For area weightage	s) including barricading depositing	160.8 1500.80 ag on bank with a out water at eve 884.00 378.00	all lead
9	Basic rate Add 12% For area weightage Earthwork excavation for pipeline trenches (Except building wor including danger lighting and using sight rails and boning rods in meters wherever neccessary as directed in the following Strata KUWSDB SR 15-16,SI No 1-vi-(a),Pg No 9 In hard rock by Controlled blasting O to 2mtr depth Basic rate Add Add 12% For area weightage 2 to 4mtr depth	c) including barricading depositin cluding shoring, strutting, bailing	160.8 1500.80 Ig on bank with a out water at eve 884.00 378.00 151.44 1413.44	all lead
9	Basic rate Add 12% For area weightage Earthwork excavation for pipeline trenches (Except building wor including danger lighting and using sight rails and boning rods in meters wherever neccessary as directed in the following Strata KUWSDB SR 15-16,SI No 1-vi-(a),Pg No 9 In hard rock by Controlled blasting O to 2mtr depth Basic rate Add Add 12% For area weightage 2 to 4mtr depth Basic rate	c) including barricading depositin cluding shoring, strutting, bailing	160.8 1500.80 Ig on bank with a out water at eve 884.00 378.00 151.44 1413.44	all lead
9	Basic rate Add 12% For area weightage Earthwork excavation for pipeline trenches (Except building wor including danger lighting and using sight rails and boning rods in meters wherever neccessary as directed in the following Strata KUWSDB SR 15-16,SI No 1-vi-(a),Pg No 9 In hard rock by Controlled blasting O to 2mtr depth Basic rate Add Add 12% For area weightage 2 to 4mtr depth Basic rate Add	c) including barricading depositin cluding shoring, strutting, bailing	160.8 1500.80 Ig on bank with a out water at eve 884.00 378.00 151.44 1413.44 1020.00 378.00	all lead
9 a	Basic rate Add 12% For area weightage Earthwork excavation for pipeline trenches (Except building wor including danger lighting and using sight rails and boning rods in meters wherever neccessary as directed in the following Strata KUWSDB SR 15-16,SI No 1-vi-(a),Pg No 9 In hard rock by Controlled blasting O to 2mtr depth Basic rate Add Add 12% For area weightage 2 to 4mtr depth Basic rate	Rate	160.8 1500.80 Ig on bank with a out water at eve 884.00 378.00 151.44 1413.44 1020.00 378.00 167.76	all lead ery 100
9	Basic rate Add 12% For area weightage Earthwork excavation for pipeline trenches (Except building wor including danger lighting and using sight rails and boning rods in meters wherever neccessary as directed in the following Strata KUWSDB SR 15-16,SI No 1-vi-(a),Pg No 9 In hard rock by Controlled blasting O to 2mtr depth Basic rate Add Add 12% For area weightage 2 to 4mtr depth Basic rate Add	c) including barricading depositin cluding shoring, strutting, bailing	160.8 1500.80 Ig on bank with a out water at eve 884.00 378.00 151.44 1413.44 1020.00 378.00	all lead ery 100
9 a	Basic rate Add 12% For area weightage Earthwork excavation for pipeline trenches (Except building wor including danger lighting and using sight rails and boning rods ir meters wherever neccessary as directed in the following Strata KUWSDB SR 15-16,SI No 1-vi-(a),Pg No 9 In hard rock by Controlled blasting O to 2mtr depth Basic rate Add Add 12% For area weightage 2 to 4mtr depth Basic rate Add Add 12% For area weightage	Rate	160.8 1500.80 Ig on bank with a out water at eve 884.00 378.00 151.44 1413.44 1020.00 378.00 167.76 1565.76	Cum
9 a	Basic rate Add 12% For area weightage Earthwork excavation for pipeline trenches (Except building wor including danger lighting and using sight rails and boning rods ir meters wherever neccessary as directed in the following Strata KUWSDB SR 15-16,SI No 1-vi-(a),Pg No 9 In hard rock by Controlled blasting O to 2mtr depth Basic rate Add Add 12% For area weightage 2 to 4mtr depth Basic rate Add Add 12% For area weightage Earthwork excavation for pipeline trenches (Except building wor	Rate Rate Rate Rate	160.8 1500.80 Ig on bank with a out water at eve 884.00 378.00 151.44 1413.44 1020.00 378.00 167.76 1565.76	Cum Cum
9 a b	Basic rate Add 12% For area weightage Earthwork excavation for pipeline trenches (Except building wor including danger lighting and using sight rails and boning rods ir meters wherever neccessary as directed in the following Strata KUWSDB SR 15-16,SI No 1-vi-(a),Pg No 9 In hard rock by Controlled blasting O to 2mtr depth Basic rate Add Add 12% For area weightage 2 to 4mtr depth Basic rate Add Add 12% For area weightage Earthwork excavation for pipeline trenches (Except building wor including danger lighting and using sight rails and boning rods in	Rate Rate Rate Rate	160.8 1500.80 Ig on bank with a out water at eve 884.00 378.00 151.44 1413.44 1020.00 378.00 167.76 1565.76	Cum Cum
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9 a b	Basic rate Add 12% For area weightage Earthwork excavation for pipeline trenches (Except building wor including danger lighting and using sight rails and boning rods in meters wherever neccessary as directed in the following Strata KUWSDB SR 15-16,SI No 1-vi-(a),Pg No 9 In hard rock by Controlled blasting O to 2mtr depth Basic rate Add Add 12% For area weightage 2 to 4mtr depth Basic rate Add Add 12% For area weightage Earthwork excavation for pipeline trenches (Except building wor including danger lighting and using sight rails and boning rods in meters wherever neccessary as directed in the following Strata KUWSDB SR 15-16,SI No 1-v-(a),Pg No 7	Rate Rate Rate Rate	160.8 1500.80 Ig on bank with a out water at eve 884.00 378.00 151.44 1413.44 1020.00 378.00 167.76 1565.76	Cum Cum
9 a b	Basic rate Add 12% For area weightage Earthwork excavation for pipeline trenches (Except building wor including danger lighting and using sight rails and boning rods ir meters wherever neccessary as directed in the following Strata KUWSDB SR 15-16,SI No 1-vi-(a),Pg No 9 In hard rock by Controlled blasting O to 2mtr depth Basic rate Add Add 12% For area weightage 2 to 4mtr depth Basic rate Add Add 12% For area weightage Earthwork excavation for pipeline trenches (Except building wor including danger lighting and using sight rails and boning rods in meters wherever neccessary as directed in the following Strata KUWSDB SR 15-16,SI No 1-v-(a),Pg No 7 In hard rock by chistelling	Rate Rate Rate Rate	160.8 1500.80 Ig on bank with a out water at eve 884.00 378.00 151.44 1413.44 1020.00 378.00 167.76 1565.76	Cum Cum
9 a b	Basic rate Add 12% For area weightage Earthwork excavation for pipeline trenches (Except building wor including danger lighting and using sight rails and boning rods ir meters wherever neccessary as directed in the following Strata KUWSDB SR 15-16,SI No 1-vi-(a),Pg No 9 In hard rock by Controlled blasting O to 2mtr depth Basic rate Add Add 12% For area weightage 2 to 4mtr depth Basic rate Add Add 12% For area weightage Earthwork excavation for pipeline trenches (Except building wor including danger lighting and using sight rails and boning rods ir meters wherever neccessary as directed in the following Strata KUWSDB SR 15-16,SI No 1-v-(a),Pg No 7 In hard rock by chistelling O to 2mtr depth	Rate Rate Rate Rate	160.8 1500.80 Ig on bank with a out water at eve 884.00 378.00 151.44 1413.44 1020.00 378.00 167.76 1565.76 Ig on bank with a out water at eve	Cum Cum
9 a b	Basic rate Add 12% For area weightage Earthwork excavation for pipeline trenches (Except building wor including danger lighting and using sight rails and boning rods in meters wherever neccessary as directed in the following Strata KUWSDB SR 15-16,SI No 1-vi-(a),Pg No 9 In hard rock by Controlled blasting O to 2mtr depth Basic rate Add Add 12% For area weightage 2 to 4mtr depth Basic rate Add Add 12% For area weightage Earthwork excavation for pipeline trenches (Except building wor including danger lighting and using sight rails and boning rods in meters wherever neccessary as directed in the following Strata KUWSDB SR 15-16,SI No 1-v-(a),Pg No 7 In hard rock by chistelling O to 2mtr depth Basic rate	Rate Rate Rate Rate	160.8 1500.80 Ig on bank with a out water at eve 884.00 378.00 151.44 1413.44 1020.00 378.00 167.76 1565.76 Ig on bank with a out water at eve	Cum Cum
9 a b	Basic rate Add 12% For area weightage Earthwork excavation for pipeline trenches (Except building wor including danger lighting and using sight rails and boning rods ir meters wherever neccessary as directed in the following Strata KUWSDB SR 15-16,SI No 1-vi-(a),Pg No 9 In hard rock by Controlled blasting O to 2mtr depth Basic rate Add Add 12% For area weightage 2 to 4mtr depth Basic rate Add Add 12% For area weightage Earthwork excavation for pipeline trenches (Except building wor including danger lighting and using sight rails and boning rods ir meters wherever neccessary as directed in the following Strata KUWSDB SR 15-16,SI No 1-v-(a),Pg No 7 In hard rock by chistelling O to 2mtr depth	Rate Rate Rate Rate	160.8 1500.80 Ig on bank with a out water at eve 884.00 378.00 151.44 1413.44 1020.00 378.00 167.76 1565.76 Ig on bank with a out water at eve	Cum Cum Cum
9 a b	Basic rate Add 12% For area weightage Earthwork excavation for pipeline trenches (Except building wor including danger lighting and using sight rails and boning rods in meters wherever neccessary as directed in the following Strata KUWSDB SR 15-16,SI No 1-vi-(a),Pg No 9 In hard rock by Controlled blasting O to 2mtr depth Basic rate Add Add 12% For area weightage 2 to 4mtr depth Basic rate Add Add 12% For area weightage Earthwork excavation for pipeline trenches (Except building wor including danger lighting and using sight rails and boning rods in meters wherever neccessary as directed in the following Strata KUWSDB SR 15-16,SI No 1-v-(a),Pg No 7 In hard rock by chistelling O to 2mtr depth Basic rate	Rate Rate Rate Rate	160.8 1500.80 Ig on bank with a out water at eve 884.00 378.00 151.44 1413.44 1020.00 378.00 167.76 1565.76 Ig on bank with a out water at eve	Cum Cum Cum
9 a b	Basic rate Add 12% For area weightage Earthwork excavation for pipeline trenches (Except building wor including danger lighting and using sight rails and boning rods in meters wherever neccessary as directed in the following Strata KUWSDB SR 15-16,SI No 1-vi-(a),Pg No 9 In hard rock by Controlled blasting O to 2mtr depth Basic rate Add Add 12% For area weightage 2 to 4mtr depth Basic rate Add Add 12% For area weightage Earthwork excavation for pipeline trenches (Except building wor including danger lighting and using sight rails and boning rods in meters wherever neccessary as directed in the following Strata KUWSDB SR 15-16,SI No 1-v-(a),Pg No 7 In hard rock by chistelling O to 2mtr depth Basic rate Add 12% For area weightage 2 to 4mtr depth	Rate Rate Cluding shoring, strutting, bailing	160.8 1500.80 Ig on bank with a out water at eve 884.00 378.00 151.44 1413.44 1020.00 378.00 167.76 1565.76 Ig on bank with a out water at eve 1590.00 190.8 1780.80	Cum Cum Cum
9 a b	Basic rate Add 12% For area weightage Earthwork excavation for pipeline trenches (Except building wor including danger lighting and using sight rails and boning rods in meters wherever neccessary as directed in the following Strata KUWSDB SR 15-16,Sl No 1-vi-(a),Pg No 9 In hard rock by Controlled blasting O to 2mtr depth Basic rate Add Add 12% For area weightage 2 to 4mtr depth Basic rate Add Add 12% For area weightage Earthwork excavation for pipeline trenches (Except building wor including danger lighting and using sight rails and boning rods in meters wherever neccessary as directed in the following Strata KUWSDB SR 15-16,Sl No 1-v-(a),Pg No 7 In hard rock by chistelling O to 2mtr depth Basic rate Add 12% For area weightage 2 to 4mtr depth Basic rate Add 12% For area weightage	Rate Rate Cluding shoring, strutting, bailing	160.8 1500.80 Ig on bank with a out water at eve 884.00 378.00 151.44 1413.44 1020.00 378.00 167.76 1565.76 Ig on bank with a out water at eve 1590.00 190.8 1780.80	Cum Cum Cum
9 a	Basic rate Add 12% For area weightage Earthwork excavation for pipeline trenches (Except building wor including danger lighting and using sight rails and boning rods in meters wherever neccessary as directed in the following Strata KUWSDB SR 15-16,SI No 1-vi-(a),Pg No 9 In hard rock by Controlled blasting O to 2mtr depth Basic rate Add Add 12% For area weightage 2 to 4mtr depth Basic rate Add Add 12% For area weightage Earthwork excavation for pipeline trenches (Except building wor including danger lighting and using sight rails and boning rods in meters wherever neccessary as directed in the following Strata KUWSDB SR 15-16,SI No 1-v-(a),Pg No 7 In hard rock by chistelling O to 2mtr depth Basic rate Add 12% For area weightage 2 to 4mtr depth	Rate Rate Cluding shoring, strutting, bailing	160.8 1500.80 Ig on bank with a out water at eve 884.00 378.00 151.44 1413.44 1020.00 378.00 167.76 1565.76 Ig on bank with a out water at eve 1590.00 190.8 1780.80	Cum Cum Cum Cum Cum

	Earthwork Excavation by Mechanical Means			
	Earthwork in excavation for pipeline trenches beyond 600mm and 1500mm	trench width as	per drawing and ted	chnical
	specification, including setting out, construction of shoring, strutting, barricad			
11	boning rods at every 100 meters wherever neccessary as directed, removal of			
	of sides and levelling the bottom of trench to the extent required, utilising th	e available excav	ated earth locally fo	r the wo
	etc.,complete in the following strata.			
	KUWSDB SR 15-16,SI No Vii 3,Pg No 11			
	-			
	a) - do - In ordinary/All soils/Hard soil			
	Basic rate		96.00)
	Add 12% For area weightage		11.52	
		Rate	107.52	
		Nate	107.32	Cuiii
	b) -do- In Ordinary Rock (not requiring blasting)		1	1
	Basic rate		131.00	
	Add 12% For area weightage		15.72	!
		Rate	146.72	Cum
	c) -do- In Hard Rock (requiring blasting)	1		
	Basic rate		757.00	1
		-		1
	Add 12% For area weightage		90.84	1
		Rate	847.84	Cum
				
	Providing course sand bedding for the pipeline trenches including watering a	and consolidation	n hy nunners etc. coi	mnlete
12	with all lead and lift (In black cotton and rock reaches)		Toy purmers eco.,co.	mpiece
12				
	KUWSDB 15-16,Pg No 17,Sl No.6		1	1
	Basic rate		1616.00)
	Add 12% For area weightage		193.92	
		Rate	1809.92	
13	Providing Muram/Gravel Bedding for the pipeline trenches including watering with all lead and lift as directed including barricading, danger lighting etc., as	ng and consolida	tion by punners etc.	., comple
13	with all lead and lift as directed including barricading, danger lighting etc., as complete, for all type of soils excluding black cotton soil and rock reaches.	ng and consolida	tion by punners etc.	., comple
13	with all lead and lift as directed including barricading, danger lighting etc., as complete, for all type of soils excluding black cotton soil and rock reaches. KUWSDB Pg No.17,Sl No.6.1,6.2	ng and consolida	tion by punners etc. Engineer-in-Charge	., comple etc.,
13	with all lead and lift as directed including barricading, danger lighting etc., as complete, for all type of soils excluding black cotton soil and rock reaches. KUWSDB Pg No.17,Sl No.6.1,6.2 Basic rate	ng and consolida	tion by punners etc. Engineer-in-Charge	., comple etc.,
13	with all lead and lift as directed including barricading, danger lighting etc., as complete, for all type of soils excluding black cotton soil and rock reaches. KUWSDB Pg No.17,Sl No.6.1,6.2	ng and consolida s directed by the	tion by punners etc. Engineer-in-Charge 247.00 29.64	., comple etc.,
13	with all lead and lift as directed including barricading, danger lighting etc., as complete, for all type of soils excluding black cotton soil and rock reaches. KUWSDB Pg No.17,Sl No.6.1,6.2 Basic rate	ng and consolida	tion by punners etc. Engineer-in-Charge	., comple etc.,
13	with all lead and lift as directed including barricading, danger lighting etc., as complete, for all type of soils excluding black cotton soil and rock reaches. KUWSDB Pg No.17,Sl No.6.1,6.2 Basic rate Add 12% For area weightage	ng and consolida s directed by the Rate	tion by punners etc. Engineer-in-Charge 247.00 29.64 276.64	comple etc.,
13	with all lead and lift as directed including barricading, danger lighting etc., as complete, for all type of soils excluding black cotton soil and rock reaches. KUWSDB Pg No.17,Sl No.6.1,6.2 Basic rate	ng and consolida s directed by the Rate	tion by punners etc. Engineer-in-Charge 247.00 29.64 276.64	comple etc.,
13	with all lead and lift as directed including barricading, danger lighting etc., as complete, for all type of soils excluding black cotton soil and rock reaches. KUWSDB Pg No.17,SI No.6.1,6.2 Basic rate Add 12% For area weightage KSRB 4-1.6; Providing and laying in position plain cement concrete of mix 1:	ng and consolida s directed by the Rate	tion by punners etc. Engineer-in-Charge 247.00 29.64 276.64 @ 240kgs, with 20m	cum
13	with all lead and lift as directed including barricading, danger lighting etc., as complete, for all type of soils excluding black cotton soil and rock reaches. KUWSDB Pg No.17,Sl No.6.1,6.2 Basic rate Add 12% For area weightage KSRB 4-1.6; Providing and laying in position plain cement concrete of mix 1: down size graded granite metal coarse aggregates @ 0.69 cum and fine aggr	ng and consolida s directed by the Rate 2:4 with cement regtes @ 0.459cu	tion by punners etc. Engineer-in-Charge 247.00 29.64 276.64 @ 240kgs, with 20m im, machine mixed, o	concrete
13	with all lead and lift as directed including barricading, danger lighting etc., as complete, for all type of soils excluding black cotton soil and rock reaches. KUWSDB Pg No.17,Sl No.6.1,6.2 Basic rate Add 12% For area weightage KSRB 4-1.6; Providing and laying in position plain cement concrete of mix 1: down size graded granite metal coarse aggregates @ 0.69 cum and fine aggregated in layers not exceeding 15 cms. thick, well compacted, in foundation, pli	Rate 2:4 with cement regtes @ 0.459cunth and cills, nclu	tion by punners etc. Engineer-in-Charge 247.00 29.64 276.64 @ 240kgs, with 20m im, machine mixed, adding cost of all mater	concrete
	with all lead and lift as directed including barricading, danger lighting etc., as complete, for all type of soils excluding black cotton soil and rock reaches. KUWSDB Pg No.17,Sl No.6.1,6.2 Basic rate Add 12% For area weightage KSRB 4-1.6; Providing and laying in position plain cement concrete of mix 1: down size graded granite metal coarse aggregates @ 0.69 cum and fine aggr laid in layers not exceeding 15 cms. thick, well compacted, in foundation, pli labour, HOM of machinery, curing complete as per specifications. Specifications.	Rate 2:4 with cement regtes @ 0.459cunth and cills, nclu	tion by punners etc. Engineer-in-Charge 247.00 29.64 276.64 @ 240kgs, with 20m im, machine mixed, adding cost of all mater	concrete
	with all lead and lift as directed including barricading, danger lighting etc., as complete, for all type of soils excluding black cotton soil and rock reaches. KUWSDB Pg No.17,Sl No.6.1,6.2 Basic rate Add 12% For area weightage KSRB 4-1.6; Providing and laying in position plain cement concrete of mix 1: down size graded granite metal coarse aggregates @ 0.69 cum and fine aggregated in layers not exceeding 15 cms. thick, well compacted, in foundation, pli	Rate 2:4 with cement regtes @ 0.459cunth and cills, nclu	tion by punners etc. Engineer-in-Charge 247.00 29.64 276.64 @ 240kgs, with 20m im, machine mixed, adding cost of all mater	concrete
	with all lead and lift as directed including barricading, danger lighting etc., as complete, for all type of soils excluding black cotton soil and rock reaches. KUWSDB Pg No.17,Sl No.6.1,6.2 Basic rate Add 12% For area weightage KSRB 4-1.6; Providing and laying in position plain cement concrete of mix 1: down size graded granite metal coarse aggregates @ 0.69 cum and fine aggr laid in layers not exceeding 15 cms. thick, well compacted, in foundation, pli labour, HOM of machinery, curing complete as per specifications. Specifications.	Rate 2:4 with cement regtes @ 0.459cunth and cills, nclu	tion by punners etc. Engineer-in-Charge 247.00 29.64 276.64 @ 240kgs, with 20m im, machine mixed, adding cost of all mater	concrete
	with all lead and lift as directed including barricading, danger lighting etc., as complete, for all type of soils excluding black cotton soil and rock reaches. KUWSDB Pg No.17,Sl No.6.1,6.2 Basic rate Add 12% For area weightage KSRB 4-1.6; Providing and laying in position plain cement concrete of mix 1: down size graded granite metal coarse aggregates @ 0.69 cum and fine aggr laid in layers not exceeding 15 cms. thick, well compacted, in foundation, pli labour, HOM of machinery, curing complete as per specifications. Specificati KSRB 16-17, Pg No.12,Sl No.4.6	Rate 2:4 with cement regtes @ 0.459cunth and cills, nclu	tion by punners etc. Engineer-in-Charge 247.00 29.64 276.64 @ 240kgs, with 20m im, machine mixed, or uding cost of all mate 1.2.	comple etc., Cum
	with all lead and lift as directed including barricading, danger lighting etc., as complete, for all type of soils excluding black cotton soil and rock reaches. KUWSDB Pg No.17,SI No.6.1,6.2 Basic rate Add 12% For area weightage KSRB 4-1.6; Providing and laying in position plain cement concrete of mix 1: down size graded granite metal coarse aggregates @ 0.69 cum and fine aggr laid in layers not exceeding 15 cms. thick, well compacted, in foundation, pli labour, HOM of machinery, curing complete as per specifications. Specificati KSRB 16-17, Pg No.12,SI No.4.6 Basic rate	Rate 2:4 with cement regtes @ 0.459cunth and cills, nclu	tion by punners etc. Engineer-in-Charge 247.00 29.64 276.64 @ 240kgs, with 20m im, machine mixed, or iding cost of all mate 3.2.	comple etc., Cum
	with all lead and lift as directed including barricading, danger lighting etc., as complete, for all type of soils excluding black cotton soil and rock reaches. KUWSDB Pg No.17,Sl No.6.1,6.2 Basic rate Add 12% For area weightage KSRB 4-1.6; Providing and laying in position plain cement concrete of mix 1: down size graded granite metal coarse aggregates @ 0.69 cum and fine aggr laid in layers not exceeding 15 cms. thick, well compacted, in foundation, pli labour, HOM of machinery, curing complete as per specifications. Specificati KSRB 16-17, Pg No.12,Sl No.4.6	Rate 2:4 with cement regtes @ 0.459cunth and cills, nclu	tion by punners etc. Engineer-in-Charge 247.00 29.64 276.64 @ 240kgs, with 20m m, machine mixed, or ding cost of all mate 1.2. 5441.00 652.92	Cum and concrete erials,
	with all lead and lift as directed including barricading, danger lighting etc., as complete, for all type of soils excluding black cotton soil and rock reaches. KUWSDB Pg No.17,SI No.6.1,6.2 Basic rate Add 12% For area weightage KSRB 4-1.6; Providing and laying in position plain cement concrete of mix 1: down size graded granite metal coarse aggregates @ 0.69 cum and fine aggr laid in layers not exceeding 15 cms. thick, well compacted, in foundation, pli labour, HOM of machinery, curing complete as per specifications. Specificati KSRB 16-17, Pg No.12,SI No.4.6 Basic rate	Rate 2:4 with cement regtes @ 0.459cunth and cills, nclu	tion by punners etc. Engineer-in-Charge 247.00 29.64 276.64 @ 240kgs, with 20m im, machine mixed, or iding cost of all mate 3.2.	Cum and concrete erials,
	with all lead and lift as directed including barricading, danger lighting etc., as complete, for all type of soils excluding black cotton soil and rock reaches. KUWSDB Pg No.17,SI No.6.1,6.2 Basic rate Add 12% For area weightage KSRB 4-1.6; Providing and laying in position plain cement concrete of mix 1: down size graded granite metal coarse aggregates @ 0.69 cum and fine aggr laid in layers not exceeding 15 cms. thick, well compacted, in foundation, pli labour, HOM of machinery, curing complete as per specifications. Specificati KSRB 16-17, Pg No.12,SI No.4.6 Basic rate	Rate 2:4 with cement egtes @ 0.459cunth and cills, ncluon No. KBS 4.1, 4	tion by punners etc. Engineer-in-Charge 247.00 29.64 276.64 @ 240kgs, with 20m m, machine mixed, or ding cost of all mate 1.2. 5441.00 652.92	Cum and concrete erials,
	with all lead and lift as directed including barricading, danger lighting etc., as complete, for all type of soils excluding black cotton soil and rock reaches. KUWSDB Pg No.17,Sl No.6.1,6.2 Basic rate Add 12% For area weightage KSRB 4-1.6; Providing and laying in position plain cement concrete of mix 1: down size graded granite metal coarse aggregates @ 0.69 cum and fine aggr laid in layers not exceeding 15 cms. thick, well compacted, in foundation, pli labour, HOM of machinery, curing complete as per specifications. Specificati KSRB 16-17, Pg No.12,Sl No.4.6 Basic rate Add 12% For area weightage	Rate 2:4 with cement regtes @ 0.459cunth and cills, ncluon No. KBS 4.1, 4	tion by punners etc. Engineer-in-Charge 247.00 29.64 276.64 @ 240kgs, with 20m m, machine mixed, adding cost of all mate 1.2. 5441.00 652.92 6093.92	cum Cum Cum Cum Cum Cum Cum Cum
	with all lead and lift as directed including barricading, danger lighting etc., as complete, for all type of soils excluding black cotton soil and rock reaches. KUWSDB Pg No.17,Sl No.6.1,6.2 Basic rate Add 12% For area weightage KSRB 4-1.6; Providing and laying in position plain cement concrete of mix 1: down size graded granite metal coarse aggregates @ 0.69 cum and fine aggr laid in layers not exceeding 15 cms. thick, well compacted, in foundation, pli labour, HOM of machinery, curing complete as per specifications. Specificati KSRB 16-17, Pg No.12,Sl No.4.6 Basic rate Add 12% For area weightage Supplying Unplasticised PVC pipes confirming to IS 15328:2003 with latest a	Rate 2:4 with cement regtes @ 0.459cu on No. KBS 4.1, 4	tion by punners etc. Engineer-in-Charge 247.00 29.64 276.64 @ 240kgs, with 20m m, machine mixed, adding cost of all mate 1.2. 5441.00 652.92 ded with integral soc	Cum mm and concrete erials, Cum
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16	Supplying Unplasticised PVC pipes confirming to IS 15328:2003 with latest a ISI mark and conveying to worksite, rolling and lowering into trenches, Laying joints, testing and commissioning, including loading and unloading at both de necessary including jointing of UPVC Pipes (with cost of elastomeric sealing r with jointing of approved type, with all labour with all lead and lift including than 15cms with soft gravel or selected earth available from the excavation etest to the required pressure as per ISS (Contractor will make his own arrang KUWSDB, Pg No 207 and 207, SI No b1	true to line and I stinations and cuings) and special encasing the pipe etc.,complete and	evel and perfect linking at its of pipes wherever s (excluding cost of specials) alround to a depth of not less d giving neccessary hydraulic
	Supply and laying of PVC- U Pipes as per IS 15328 SN 8 -Ring tite: 110mm		
	Basic rate Material Rate		269.00
	Labour Rate		33
	Add 12% For area weightage For labour		3.96
		Rate	305.96 Rmt
17	Construction RCC M25 circular inspection chamber 600 mm dia x 600mm de with M15 PCC bed for 100 mm thick using mix with cement @240 kgs granite clean sieved river sand, M25 RCC raft & sidewall concrete with 20mm and de floating coat of cement on walls and bed concrete complete, including fixing work spot supply and fixing SFRC manhole cover and frame (Heavy Duty) coas per standard design including cost of reinforcement, all materials, labour as Per Data Rate	e graded metal of ownsize granite r g and grouting of nfirming to IS: 12	f 20 mm and down size and metal, , finish smooth with a pipes, including conveying to 592 with latest amendments
	Basic rate		6637.00
		Rate	6637.00 Nos
			<u>.</u>
18	Making connections of drain or sewer line of size 100mm to 230mm externa into and making good the walls, floors with cement concrete M15 with 20mr plastered on both sides with cement mortar 1:3 finished with a floating coat for the drain etc., complete PWD SR 2016-17,SI No.11.47.3,Pg No.73	m and downsize ខ្	granite metal mix cement and making necessary channels
	Basic rate		1734.00
	Add 12% For area weightage	Rate	208.08 1942.08 Nos
		Nate	1942.08 1403
19	Constructing RCC Manhole chamber of 1:1.5:3 proportion or approved type using form vibrators of standard type, with barricading, danger lighting and onecessary, shoring and strutting wherever required using ordinary port land mm and down graded jelly, well graded sand and steel of approved quality, thickness and raft thickness as in approved drawings and with an offset in radrawing, benching concrete with 1:6 slope towards the central drain finished including conveying to work spot supply and fixing SFRC manhole cover and with latest amendments, on a bed of CC 1:2:4 supplying and fixing of minimulas per IS 10910) on 12 mm dia. Grade Fe-415 steel bar (as per IS 1786) stage specifications, including sand bedding wherever required, disposal of surplus number with flow direction on the inner cylindrical surface etc., complete including the flow direction on the inner cylindrical surface etc., about with depths noted below as per specification, drawing and as directed by the Eng type of soil. BWSSB 16-17,SI No 84,Pg No 81-82	using of sight rail cement, using 1 200 mm thick top ft alround the ch d smooth, includi frame (Heavy Du um 3 mm thick er gered at 300 mm s earth, watering, cluding cost of re h all lead and lift:	s and boning rods wherever :1.5:3 proportion RCC with 20 o concrete slab, having wall amber as in approved ing fixing and grouting of pipes, ity) confirming to IS: 12592 incapsulated plastic footsteps (apart as detailed in Technical incuring, engraving manhole inforcement steel and is for various diameters and
Α			
а	1.2 m dia manholes		
<u> </u>	1.2 m dia manholes For 1.1 m depth		
	For 1.1 m depth Basic rate		39355.00
	For 1.1 m depth		4722.60
	For 1.1 m depth Basic rate Add 12% For Area weightage	Rate	
b	For 1.1 m depth Basic rate Add 12% For Area weightage For 1.2 m depth	Rate	4722.60 44077.60 Nos
	For 1.1 m depth Basic rate Add 12% For Area weightage For 1.2 m depth Basic rate	Rate	4722.60 44077.60 Nos 40751.00
	For 1.1 m depth Basic rate Add 12% For Area weightage For 1.2 m depth		4722.60 44077.60 Nos 40751.00 4890.12
b	For 1.1 m depth Basic rate Add 12% For Area weightage For 1.2 m depth Basic rate Add 12% For Area weightage	Rate Rate	4722.60 44077.60 Nos 40751.00
	For 1.1 m depth Basic rate Add 12% For Area weightage For 1.2 m depth Basic rate Add 12% For Area weightage For 1.3 m depth		4722.60 44077.60 Nos 40751.00 4890.12 45641.12 Nos
b	For 1.1 m depth Basic rate Add 12% For Area weightage For 1.2 m depth Basic rate Add 12% For Area weightage		4722.60 44077.60 Nos 40751.00 4890.12

		Rate	47124.00 Nos
d	For 1.4 m depth		<u>.</u>
	Basic rate		43470.00
	Add 12% For Area weightage		5216.40
		Rate	48686.40 Nos
е	For 1.5 m depth	•	•
	Basic rate		44865.00
	Add 12% For Area weightage		5383.80
		Rate	50248.80 Nos
f	For 1.6 m depth		
	Basic rate		46261.00
	Add 12% For Area weightage		5551.32
		Rate	51812.32 Nos
g	For 1.7 m depth	nate	01011.01
ь	Basic rate		47655.00
	Add 12% For Area weightage		5718.60
	7.dd 1270 f of 7thed Weightage	Rate	53373.60 Nos
h	For 1.8 m depth	Nate	33373.00 1103
- 11	Basic rate		48980.00
	Add 12% For Area weightage	+	5877.60
	And 12/01 Of Area Weightage	Poto	54857.60 Nos
:	For 1.0 m donth	Rate	34037.0U NUS
i	For 1.9 m depth	1	F027F 00
	Basic rate	+	50375.00
	Add 12% For Area weightage	 	6045.00
		Rate	56420.00 Nos
j	For 2.0m depth	1	
	Basic rate		52132.00
	Add 12% For Area weightage		6255.84
		Rate	58387.84 Nos
k	For 2.1m depth Difference of basic rate for Manhole depth 2m & 3m (6	66422-52132)	14290
	for every 0.1m depth of manhole (Difference/10)		1429
	Basic rate		53561.00
	Add 12% For Area weightage		6427.32
		Rate	59988.32 Nos
I	For 2.2m depth		
	Basic rate		54990.00
	Add 12% For Area weightage		6598.80
		Rate	61588.80 Nos
m	For 2.3m depth		
	Basic rate		56419.00
	Add 12% For Area weightage		6770.28
	<u> </u>	Rate	63189.28 Nos
n	For 2.4m depth	<u> </u>	
	Basic rate		57848.00
	Add 12% For Area weightage	1	6941.76
		Rate	64789.76 Nos
0	For 2.5m depth	nace	5 77 05 77 0 1103
<u> </u>	Basic rate	<u> </u>	59277.00
	Add 12% For Area weightage	+	7113.24
	Aug 12/01 Of Area Weightage	Poto	66390.24 Nos
r	For 2 6m donth	Rate	0039U.24 NOS
р	For 2.6m depth	1	60706.00
	Basic rate	1	60706.00
	Add 12% For Area weightage	 	7284.72
		Rate	67990.72 Nos
q	For 2.7m depth	 	
	Basic rate	 	62135.00
	Add 12% For Area weightage	1	7456.20
		Rate	69591.20 Nos
r	For 2.8m depth		
r	Basic rate		63564.00
r			63564.00 7627.68
r	Basic rate	Rate	
r	Basic rate	Rate	7627.68

_	Add 12% For Area weightage		7799.16	
		Rate	72792.16	Nos
t	For 3.0m depth			
	Basic rate		66422.00	
	Add 12% For Area weightage		7970.64	
		Rate	74392.64	Nos
В	1.5 m dia manholes		·	
a	For 3.1m depth Difference of basic rate for Manhole depth 3m & 4m (10	0811-83642)	17169	
ч	for every 0.1m depth of manhole (Difference/10)	0011-03042)	1716.9	
	Basic rate		85358.90	
	Add 12% For Area weightage	D-1-	10243.07	NI
		Rate	95601.97	NOS
b	For 3.2m depth			
	Basic rate		87075.80	
	Add 12% For Area weightage		10449.10	
		Rate	97524.90	Nos
С	For 3.8m depth			
	Basic rate		97377.20	
	Add 12% For Area weightage		11685.26	
		Rate	109062.46	Nos
d	For 4.3m depth	<u> </u>		i
	Basic rate		108149.30	
	Add 12% For Area weightage		12977.92	
	- au or rica neighbage	Rate	121127.22	Nos
Δ	For 4.6m depth	Mate	121121.22	.103
e	Basic rate	ı	115/07 60	
			115487.60	
	Add 12% For Area weightage		13858.51	
		Rate	129346.11	Nos
f	For 4.9m depth			
	Basic rate		122825.90	
	Add 12% For Area weightage		14739.11	
		Rate	137565.01	Nos
			ii lead affu lift.	
20	watering,consolidation in layers of 15cms.,thick including disposing off the su KUWSDB Pg No 15,SI No 2	inplus cartif with a		
20	KUWSDB Pg No 15,SI No 2	ar plus earth with a		
20	KUWSDB Pg No 15,SI No 2 Basic Rate	arpius eartii witii a	59.00	
20	KUWSDB Pg No 15,SI No 2		59.00 7.08	
20	KUWSDB Pg No 15,SI No 2 Basic Rate	Rate	59.00	
	KUWSDB Pg No 15,SI No 2 Basic Rate	Rate and disposal but e	59.00 7.08 66.08 xcluding replacem	Cum ent by
	Removal of Unserviceable Soil with Disposal KSRRB M300-19. Removal of unserviceable soil including excavation, loading suitable soil which shall be paid separately as per clause 300.5 complete as p	Rate and disposal but e	59.00 7.08 66.08 xcluding replacem	Cum ent by
	Removal of Unserviceable Soil with Disposal KSRRB M300-19. Removal of unserviceable soil including excavation, loading suitable soil which shall be paid separately as per clause 300.5 complete as p KPWD Pg No. 144 ,SI No.19.20 Basic Rate	Rate and disposal but e	59.00 7.08 66.08 xcluding replacem MORTH Specification	Cum ent by
	Removal of Unserviceable Soil with Disposal KSRRB M300-19. Removal of unserviceable soil including excavation, loading suitable soil which shall be paid separately as per clause 300.5 complete as p KPWD Pg No. 144 ,SI No.19.20 Basic Rate Lead & Lift Charges - 5Km ,KPWD-16-17,SI No.17.4 (Earth=1.28),Pg No 140	Rate and disposal but e	59.00 7.08 66.08 xcluding replacem MORTH Specification 37.00 16.00	Cum ent by
220	Removal of Unserviceable Soil with Disposal KSRRB M300-19. Removal of unserviceable soil including excavation, loading suitable soil which shall be paid separately as per clause 300.5 complete as p KPWD Pg No. 144 ,SI No.19.20 Basic Rate Lead & Lift Charges - 5Km ,KPWD-16-17,SI No.17.4 (Earth=1.28),Pg No 140 Loading & Unloading -KPWD-16-17,SI No.17.1,Pg No 134	Rate and disposal but e	59.00 7.08 66.08 xcluding replacem MORTH Specification 37.00 16.00 68.00	Cum ent by
	Removal of Unserviceable Soil with Disposal KSRRB M300-19. Removal of unserviceable soil including excavation, loading suitable soil which shall be paid separately as per clause 300.5 complete as p KPWD Pg No. 144 ,SI No.19.20 Basic Rate Lead & Lift Charges - 5Km ,KPWD-16-17,SI No.17.4 (Earth=1.28),Pg No 140 Loading & Unloading -KPWD-16-17,SI No.17.1,Pg No 134 Sub Total	Rate and disposal but e	59.00 7.08 66.08 xcluding replacem MORTH Specification 37.00 16.00 68.00 121.00	Cum ent by
	Removal of Unserviceable Soil with Disposal KSRRB M300-19. Removal of unserviceable soil including excavation, loading suitable soil which shall be paid separately as per clause 300.5 complete as p KPWD Pg No. 144 ,SI No.19.20 Basic Rate Lead & Lift Charges - 5Km ,KPWD-16-17,SI No.17.4 (Earth=1.28),Pg No 140 Loading & Unloading -KPWD-16-17,SI No.17.1,Pg No 134	Rate and disposal but e	59.00 7.08 66.08 xcluding replacem MORTH Specification 37.00 16.00 68.00 121.00 14.52	Cum ent by on No. 3
	Removal of Unserviceable Soil with Disposal KSRRB M300-19. Removal of unserviceable soil including excavation, loading suitable soil which shall be paid separately as per clause 300.5 complete as p KPWD Pg No. 144 ,SI No.19.20 Basic Rate Lead & Lift Charges - 5Km ,KPWD-16-17,SI No.17.4 (Earth=1.28),Pg No 140 Loading & Unloading -KPWD-16-17,SI No.17.1,Pg No 134 Sub Total	Rate and disposal but e	59.00 7.08 66.08 xcluding replacem MORTH Specification 37.00 16.00 68.00 121.00	Cum ent by on No. 3
	Removal of Unserviceable Soil with Disposal KSRRB M300-19. Removal of unserviceable soil including excavation, loading suitable soil which shall be paid separately as per clause 300.5 complete as p KPWD Pg No. 144 ,SI No.19.20 Basic Rate Lead & Lift Charges - 5Km ,KPWD-16-17,SI No.17.4 (Earth=1.28),Pg No 140 Loading & Unloading -KPWD-16-17,SI No.17.1,Pg No 134 Sub Total	Rate and disposal but ener specifications. No Rate ed cushed stone agared surface, mixin	59.00 7.08 66.08 xcluding replacem MORTH Specification 16.00 68.00 121.00 14.52 135.52 ggregates of granit g by mix in place r	ent by on No. 3
21	Removal of Unserviceable Soil with Disposal KSRRB M300-19. Removal of unserviceable soil including excavation, loading suitable soil which shall be paid separately as per clause 300.5 complete as p KPWD Pg No. 144, SI No.19.20 Basic Rate Lead & Lift Charges - 5Km, KPWD-16-17, SI No.17.4 (Earth=1.28), Pg No 140 Loading & Unloading - KPWD-16-17, SI No.17.1, Pg No 134 Sub Total Add 12% For Area weightage KSRRB M400-6.2. Construction of Granular Sub-base by Providing Close grade/trap/basalt material spreading in uniform layers with motor grader on preparativator at OMC, and compacting with vibratory power roller to achieve the specifications. B. By mix in place Method For grading II material	Rate and disposal but ener specifications. No Rate ed cushed stone agared surface, mixin	59.00 7.08 66.08 xcluding replacem MORTH Specification 16.00 68.00 121.00 14.52 135.52 ggregates of granit g by mix in place r	ent by on No. 3
	Removal of Unserviceable Soil with Disposal KSRRB M300-19. Removal of unserviceable soil including excavation, loading suitable soil which shall be paid separately as per clause 300.5 complete as p KPWD Pg No. 144, SI No.19.20 Basic Rate Lead & Lift Charges - 5Km, KPWD-16-17, SI No.17.4 (Earth=1.28), Pg No 140 Loading & Unloading - KPWD-16-17, SI No.17.1, Pg No 134 Sub Total Add 12% For Area weightage KSRRB M400-6.2. Construction of Granular Sub-base by Providing Close grade/trap/basalt material spreading in uniform layers with motor grader on preparative to achieve the specifications. B. By mix in place Method	Rate and disposal but ener specifications. Note that the specification is a specification in the specification in the specification is a specification in the specification in the specification is a specification in the specification in the specification is a specification in the specification in the specification is a specification in the specification in the specification is a specification in the specification in the specification is a specification in the specification in the specification is a specification in the specification in the specification is a specification in the specification in the specification is a specification in the specification	59.00 7.08 66.08 xcluding replacem MORTH Specification 16.00 68.00 121.00 14.52 135.52 ggregates of granit g by mix in place r	ent by on No. 3

	Add 12% For Area weightage		168.96	
		Rate	1576.96	Cum
23	KSRRB M400-Wet Mix macadam KSRRB M400-17. Providing, laying, spread granite/trap/ basalt to wet mix macadam specification including per mixing mix plant carriage of mixed material by tipper to site, laying in uniform lay	g the material with wa ers with paver in sub-	ater at OMC in Med base/base course	chanica on well
	KSRB Pg No 158,20.18			
	Basic Rate		1668	
	Sub Total		1668.00	
	Add 12% For Area weightage		200.16	
		Rate	1868.16	Cum
24	KSRRB M500-6. Providing and applying primer coat with S.S. bitumen emulas WMM including cleaning of road surface and spraying primer at the rate complete as per specifications. MORTH Specification No. 502 KSRB Pg No.161,SI No:21.6		ng mechanical mea	
	Basic Rate		26.00	
	Sub Total		26.00	
	Add 12% For Area weightage	Rate	3.12 29.12 \$	Sam
		Rate	29.12 3	учи
25	thickness with 3.4% bitumen but excluding cost of primer/tack coat with a HOM of machineries complete as per specifications. MORTH Chanter 5, us			ted s, labou
25	thickness with 3.4% bitumen but excluding cost of primer/tack coat with a HOM of machineries complete as per specifications. MORTH Chapter 5, us environmental and social safe guards, including all taxes, as directed by the KSRRB Pg No.162,SI No. 21.11.6	ing 60/70 grade bitun	nen, Including	, labou
25	HOM of machineries complete as per specifications. MORTH Chapter 5, us environmental and social safe guards, including all taxes, as directed by the	ing 60/70 grade bitun	nen, Including	, labou
25	HOM of machineries complete as per specifications. MORTH Chapter 5, us environmental and social safe guards, including all taxes, as directed by the KSRRB Pg No.162,SI No. 21.11.6 Basic Rate Sub Total	ing 60/70 grade bitun	nen, Including etc., complete. 50n	, labou
25	HOM of machineries complete as per specifications. MORTH Chapter 5, us environmental and social safe guards, including all taxes, as directed by the KSRRB Pg No.162,SI No. 21.11.6 Basic Rate	ing 60/70 grade bitun e Engineer-in-Charge	nen, Including etc., complete. 50n 5406.00 5406.00 648.72	, labou
25	HOM of machineries complete as per specifications. MORTH Chapter 5, us environmental and social safe guards, including all taxes, as directed by the KSRRB Pg No.162,SI No. 21.11.6 Basic Rate Sub Total	ing 60/70 grade bitun	nen, Including etc., complete. 50n 5406.00 5406.00	, labou
	HOM of machineries complete as per specifications. MORTH Chapter 5, us environmental and social safe guards, including all taxes, as directed by the KSRRB Pg No.162,SI No. 21.11.6 Basic Rate Sub Total	ing 60/70 grade bitun e Engineer-in-Charge Rate n(VG10) on the prepa g cleaning of road sui	5406.00 5406.00 5406.00 648.72 6054.72 C red black topped surface) including cos 12.00 12.00 1.44	Cum urfaces
226	HOM of machineries complete as per specifications. MORTH Chapter 5, us environmental and social safe guards, including all taxes, as directed by the KSRRB Pg No.162,SI No. 21.11.6 Basic Rate Sub Total Add 12% For Area weightage KSRRB 500-7. Providing and applying tack coat using 80/100 grade bitumer 2.5 kg per 10 sqm, heating bitumen in boiler fitted with spray set (excludin materials, labour, HOM of machineries complete as per specifications. MO KSRB Pg No.161,SI No:21.7 Rev Rate-18.12.2017 Basic Rate Sub Total	ing 60/70 grade bitun e Engineer-in-Charge Rate n(VG10) on the prepa g cleaning of road sui	5406.00 5406.00 5406.00 648.72 6054.72 C red black topped surface) including cos	Cum urfaces
26	HOM of machineries complete as per specifications. MORTH Chapter 5, us environmental and social safe guards, including all taxes, as directed by the KSRRB Pg No.162,SI No. 21.11.6 Basic Rate Sub Total Add 12% For Area weightage KSRRB 500-7. Providing and applying tack coat using 80/100 grade bitumer 2.5 kg per 10 sqm, heating bitumen in boiler fitted with spray set (excludin materials, labour, HOM of machineries complete as per specifications. MO KSRB Pg No.161,SI No:21.7 Rev Rate-18.12.2017 Basic Rate Sub Total	Rate Rate n(VG10) on the prepa g cleaning of road sure RTH/Chapter 5 Rate Rate th type HMP producin with bituminous binder finisher with mechander rollers to achieve th 5% bitumen 60/70 ocification, Including e	5406.00 5406.00 648.72 6054.72 C red black topped strace) including cos 12.00 12.00 1.44 13.44 S g an average outputer at 4.5 to 5% of micel paver to the rese the desired comparade using 40-60	Cum urfaces at of all squired opaction HMP
26	HOM of machineries complete as per specifications. MORTH Chapter 5, us environmental and social safe guards, including all taxes, as directed by the KSRRB Pg No.162,SI No. 21.11.6 Basic Rate Sub Total Add 12% For Area weightage KSRRB 500-7. Providing and applying tack coat using 80/100 grade bitumer 2.5 kg per 10 sqm, heating bitumen in boiler fitted with spray set (excludin materials, labour, HOM of machineries complete as per specifications. MO KSRB Pg No.161,SI No:21.7 Rev Rate-18.12.2017 Basic Rate Sub Total Add 12% For Area weightage Providing and laying Semi dense bituminous concrete with 40-60 TPH batc tonnes per hour using crushed aggregates of specified grading, premixed v filter, transporting the hot mix to work site, laying with a hydrostatic paver grade, level and alignment, rolling with smooth wheeled, vibratory and tar per MORTH specification clause no. 500.8, 25 mm compacted thickness wi (Grading II) using mechnical paver, with all lead and lift ,Labour, as per spe guards, including all taxes, as directed by the Engineer-in-Charge etc., com KSRRB Pg No.163,SI No. 21.20.6	Rate Rate n(VG10) on the prepa g cleaning of road sure RTH/Chapter 5 Rate Rate th type HMP producin with bituminous binder finisher with mechander rollers to achieve th 5% bitumen 60/70 ocification, Including e	5406.00 5406.00 648.72 6054.72 Cred black topped surface) including cos 12.00 12.00 1.44 13.44 sg an average outputer at 4.5 to 5% of minical paver to the reserve the desired comparade using 40-60 nvironmental and surfaces.	Cum urfaces at of all squired opaction HMP
	HOM of machineries complete as per specifications. MORTH Chapter 5, us environmental and social safe guards, including all taxes, as directed by the KSRRB Pg No.162,SI No. 21.11.6 Basic Rate Sub Total Add 12% For Area weightage KSRRB 500-7. Providing and applying tack coat using 80/100 grade bitumer 2.5 kg per 10 sqm, heating bitumen in boiler fitted with spray set (excludin materials, labour, HOM of machineries complete as per specifications. MO KSRB Pg No.161,SI No:21.7 Rev Rate-18.12.2017 Basic Rate Sub Total Add 12% For Area weightage Providing and laying Semi dense bituminous concrete with 40-60 TPH batc tonnes per hour using crushed aggregates of specified grading, premixed v filter, transporting the hot mix to work site, laying with a hydrostatic paver grade, level and alignment, rolling with smooth wheeled, vibratory and tar per MORTH specification clause no. 500.8, 25 mm compacted thickness wi (Grading II) using mechnical paver, with all lead and lift ,Labour, as per spe guards, including all taxes, as directed by the Engineer-in-Charge etc., com KSRRB Pg No.163,SI No. 21.20.6 Basic Rate	Rate Rate n(VG10) on the prepa g cleaning of road sure RTH/Chapter 5 Rate Rate th type HMP producin with bituminous binder finisher with mechander rollers to achieve th 5% bitumen 60/70 ocification, Including e	5406.00 5406.00 5406.00 648.72 6054.72 cred black topped soface) including cos 12.00 12.00 1.44 13.44 13.44 sg an average outputer at 4.5 to 5% of molical paver to the refer the desired compgrade using 40-60 nvironmental and scenarios.	Cum urfaces at of all squired opaction HMP

	Add 12% For Area weightage		970.00 116.40 1086.40	
	000 1000		970.00	
	Sub Total		l	
	Basic Rate		970.00	
29	KSRB 14.6-2 :Providing and laying heavy duty cobble stones 75mm thick intermanufacture of blocks of approved size, shape and colour with a minimum of 50mm thick sand bed (average thickness) and compacting with plate vibrate forcing part of sand underneath to come up in between joints, final compact including cost of materials, labour and HOM of machineries complete as per PWD (16-17,Pg No.101,Sl No.14.7)	ompressive strer or having 3 tons of ion of paver surf	ngth of 281 kg per so compaction force the	m over ereby
		Rate	4218.20	Day
	Sub Total		4218.20	
	Basic Rate		4218.20	
28	Dewatering for Lowering of water table to creat dry conditions at least upto material, labour T & P articles & machinery laying sewer line & Manholes as prequirement of the construction of structure. The cost of this work shall be in safe place away from the structure. The dewatering will work till the complet, with all horizontal leads and lifts etc., complete in all respects as per specific execution of work enough precaution should be taken by the contractor to e delivery pipe of pumps to avoid any settlement of soil during the process. (A	per approved dra nclusive of dispo- tion of the struct cation and as dire nsure that the cl	awings according. to sal of water pumped ure as per approved ected by engineer.D ear water flows fron	the out at a drawings uring the

Executive Engineer MSCL Mangaluru

GM Technical MSCL Mangaluru

MANGALURU SMART CITY 1.6 Rate Analysis of Underground Drainage Zone 3 Part 2

RATE ANALYSIS - UnderGround Drainage Zone 3 Part 2 UTILITY SHIFTING

	DISMANTLING			
1	KSRRB M200-13.2. Dismantling of existing structures like culverts, brid of masonry, cement concrete, wood work, steel work, including T&P a dismantled material, disposal of unserviceable material and stacking t specifications. II.By Mechanical Means. MORTH Specification No. 202 KSRRB Pg No.137,Sl No.18.21	and scaffolding wherever no the serviceable material wit	ecessary, sorting	the
	Basic rate		601	
	Add 12% For area weightage		72.12	
		Rate	673.12	Cum
2	KSRRB M200-14.2. Dismantling of existing structures like culverts, brid of masonry, cement concrete, wood work, steel work, including T&P a dismantled material, disposal of unserviceable material and stacking t specifications. ii) Dismantling brick/Tile work B. In cement mortar. MC KSRRB Pg No.137,SI No.18.23	and scaffolding wherever no the serviceable material wit	ecessary, sorting	the
	Basic rate		244	
	Add 12% For area weightage		29.28	
	rad 1270 for dred Weightage	Rate	273.28	Cum
		1 11111		
1	KSRB 2-2.1: Earthwork excavation for foundation of buildings, water spits or in trenches 1.5m and above in width, in ordinary soil not exce and sides of pits and trenches, stacking the excavated soil clear from 6 breaking of clods complete as per specifications. specification. No. KBS KSRRB Pg No.5.SI No.2.3	eding 1.5 m. in depth included ges of excavation with le	ding dressing the	e bottor
1	KSRB 2-2.1: Earthwork excavation for foundation of buildings, water spits or in trenches 1.5m and above in width, in ordinary soil not exce and sides of pits and trenches, stacking the excavated soil clear from 6 breaking of clods complete as per specifications. specification. No. KBS KSRRB Pg No.5,SI No.2.3	eding 1.5 m. in depth included ges of excavation with le	ding dressing the	e bottor
1	KSRB 2-2.1: Earthwork excavation for foundation of buildings, water spits or in trenches 1.5m and above in width, in ordinary soil not exce and sides of pits and trenches, stacking the excavated soil clear from 6 breaking of clods complete as per specifications. specification. No. KBS KSRRB Pg No.5,SI No.2.3 Basic rate	eding 1.5 m. in depth included ges of excavation with le	ding dressing the ad upto 50 m. af	e bottoi
1	KSRB 2-2.1: Earthwork excavation for foundation of buildings, water spits or in trenches 1.5m and above in width, in ordinary soil not exce and sides of pits and trenches, stacking the excavated soil clear from 6 breaking of clods complete as per specifications. specification. No. KBS KSRRB Pg No.5,SI No.2.3	eding 1.5 m. in depth included ges of excavation with le	ding dressing the ad upto 50 m. af	e bottor fter
2	KSRB 2-2.1: Earthwork excavation for foundation of buildings, water spits or in trenches 1.5m and above in width, in ordinary soil not exce and sides of pits and trenches, stacking the excavated soil clear from 6 breaking of clods complete as per specifications. specification. No. KBS KSRRB Pg No.5,SI No.2.3 Basic rate	eding 1.5 m. in depth incluedges of excavation with less 2.1(a) / 2.3.5 Rate mix 1:2:4 with OPC cement of fine aggregates @ 0.459 foundation, including cost	ding dressing the ad upto 50 m. af 189 22.68 211.68 c @ 240kgs, with cum machine m	e bottor fter Cum 40mm ixed,
	KSRB 2-2.1 : Earthwork excavation for foundation of buildings, water spits or in trenches 1.5m and above in width, in ordinary soil not exce and sides of pits and trenches, stacking the excavated soil clear from 6 breaking of clods complete as per specifications. specification. No. KBS KSRRB Pg No.5,SI No.2.3 Basic rate Add 12% For area weightage KSRB 4-1.1: Providing and laying in position plain cement concrete of and down size graded granite metal coarse aggregates @0.878cum ar concrete laid in layers not exceeding 15 cms. thick, well compacted, in HOM of machinery, curing complete as per specifications. Specification	eding 1.5 m. in depth incluedges of excavation with less 2.1(a) / 2.3.5 Rate mix 1:2:4 with OPC cement of fine aggregates @ 0.459 foundation, including cost	ding dressing the ad upto 50 m. af 189 22.68 211.68 c @ 240kgs, with cum machine m	e bottor fter Cum 40mm ixed,
	KSRB 2-2.1: Earthwork excavation for foundation of buildings, water spits or in trenches 1.5m and above in width, in ordinary soil not exce and sides of pits and trenches, stacking the excavated soil clear from 6 breaking of clods complete as per specifications. specification. No. KBS KSRRB Pg No.5,SI No.2.3 Basic rate Add 12% For area weightage KSRB 4-1.1: Providing and laying in position plain cement concrete of and down size graded granite metal coarse aggregates @0.878cum ar concrete laid in layers not exceeding 15 cms. thick, well compacted, in HOM of machinery, curing complete as per specifications. Specification KSRRB Pg No.12,SI No.4.1	eding 1.5 m. in depth incluedges of excavation with less 2.1(a) / 2.3.5 Rate mix 1:2:4 with OPC cement of fine aggregates @ 0.459 foundation, including cost	189 22.68 211.68 a @ 240kgs, with the cum machine met of all materials, 625.56	Cum 40mm ixed, labour,
	KSRB 2-2.1: Earthwork excavation for foundation of buildings, water's pits or in trenches 1.5m and above in width, in ordinary soil not exce and sides of pits and trenches, stacking the excavated soil clear from 6 breaking of clods complete as per specifications. specification. No. KBS KSRRB Pg No.5,SI No.2.3 Basic rate Add 12% For area weightage KSRB 4-1.1: Providing and laying in position plain cement concrete of and down size graded granite metal coarse aggregates @0.878cum ar concrete laid in layers not exceeding 15 cms. thick, well compacted, in HOM of machinery, curing complete as per specifications. Specification KSRRB Pg No.12,SI No.4.1 Basic rate	eding 1.5 m. in depth incluedges of excavation with less 2.1(a) / 2.3.5 Rate mix 1:2:4 with OPC cement of fine aggregates @ 0.459 foundation, including cost	189 22.68 211.68 c @ 240kgs, with ecum machine met of all materials,	Cum 40mm ixed, labour
	KSRB 2-2.1: Earthwork excavation for foundation of buildings, water's pits or in trenches 1.5m and above in width, in ordinary soil not exce and sides of pits and trenches, stacking the excavated soil clear from 6 breaking of clods complete as per specifications. specification. No. KBS KSRRB Pg No.5,SI No.2.3 Basic rate Add 12% For area weightage KSRB 4-1.1: Providing and laying in position plain cement concrete of and down size graded granite metal coarse aggregates @0.878cum ar concrete laid in layers not exceeding 15 cms. thick, well compacted, in HOM of machinery, curing complete as per specifications. Specification KSRRB Pg No.12,SI No.4.1 Basic rate	Rate Rate Mix 1:2:4 with OPC cement of time aggregates @ 0.459 of oundation, including cost in No. KBS 4.1, 4.2 Rate	189 22.68 211.68 2 (240kgs, with cum machine m t of all materials, 625.56 5838.56	Cum 40mm ixed, labour,
2	KSRB 2-2.1 : Earthwork excavation for foundation of buildings, water spits or in trenches 1.5m and above in width, in ordinary soil not exce and sides of pits and trenches, stacking the excavated soil clear from 6 breaking of clods complete as per specifications. specification. No. KBS KSRRB Pg No.5,SI No.2.3 Basic rate Add 12% For area weightage KSRB 4-1.1: Providing and laying in position plain cement concrete of and down size graded granite metal coarse aggregates @0.878cum ar concrete laid in layers not exceeding 15 cms. thick, well compacted, in HOM of machinery, curing complete as per specifications. Specification KSRRB Pg No.12,SI No.4.1 Basic rate Add 12% For area weightage Providing and constructing granite / trap / basalt size stone masonry in hammerd dressed in courses not less than 20 cms high, bond stones a materials, labour, curing complete as per specifications. KBS 5.1.13 KSRRB Pg No.254,SI No.34.8.2 Basic rate	Rate Rate Mix 1:2:4 with OPC cement of time aggregates @ 0.459 of oundation, including cost in No. KBS 4.1, 4.2 Rate	189 22.68 211.68 2 (240kgs, with cum machine m t of all materials, 625.56 5838.56	Cum 40mm ixed, labour,
2	KSRB 2-2.1 : Earthwork excavation for foundation of buildings, water spits or in trenches 1.5m and above in width, in ordinary soil not exce and sides of pits and trenches, stacking the excavated soil clear from 6 breaking of clods complete as per specifications. specification. No. KBS KSRRB Pg No.5,SI No.2.3 Basic rate Add 12% For area weightage KSRB 4-1.1: Providing and laying in position plain cement concrete of and down size graded granite metal coarse aggregates @0.878cum ar concrete laid in layers not exceeding 15 cms. thick, well compacted, in HOM of machinery, curing complete as per specifications. Specification KSRRB Pg No.12,SI No.4.1 Basic rate Add 12% For area weightage Providing and constructing granite / trap / basalt size stone masonry in hammerd dressed in courses not less than 20 cms high, bond stones a materials, labour, curing complete as per specifications. KBS 5.1.13 KSRRB Pg No.254,SI No.34.8.2	Rate Rate Mix 1:2:4 with OPC cement of time aggregates @ 0.459 of oundation, including cost in No. KBS 4.1, 4.2 Rate	189 22.68 211.68 2 (a) 240kgs, with locum machine met of all materials, 5213 625.56 5838.56 mortar 1:6 stonurse including cost	Cum 40mm ixed, labour

	Providing & constructing laterite size stone masonry in CM 1:6	including cost and conveyance of	all materials curing, e
4	complete as per specification I.S. 3620 / 1979 having compress	ive strength not less than 3.5 N/m	nm2 for saturated dry
4	samples. For super structure in CM 1:6 (Cement 45 kgs/M3) (G	round Floor)	
	KSRRB Pg No.267,SI No.37.66.1		
	Basic rate		4410.00
	Add 12% For area weightage		529.2
		Rate	4939.20 Cum
	KSRB15-3.11 : Providing 20mm thick cement plaster in single co	oat with cement mortar 1:4, to sto	one masonry & concre
	surface including rounding off corners wherever required smoo		
5	including cost of materials, labour, curing complete as per spec		, , , , , , , , , , , , , , , , , , , ,
	KSRRB Pg No.114,Sl No.15.19		
	Basic rate		224.00
			234.00
	Add 12% For area weightage		28.08
		Rate	262.08 Sqm
	KSRB 15-16.1: Providing and finishing external walls in two coa	·	• •
	shade to give an even shade after throughly brooming the surfa		
6	from mortar drops and other foreign matter cost of materials,	labour, complete as per specificat	tions with primer.
	KSRRB Pg No.118,SI No.15.53.2		
	Basic rate		84.00
	Add 12% For area weightage		10.08
		Rate	94.08 Sqm
		Nate	34.00 3qm
	KSRB 2.3: Filling available excavated earth (excluding rock) in sid	des of foundations upto plinth in	layers not exceeding
_	20cms. In depth, compacting each deposited layer by ramming		
7	including cost of all labour complete as per specifications. Spec	_	·
	KSRRB Pg No.6,SI No.2.10		
	Basic Material Rate		127.00
	Add 12% For area weightage		15.24
	0 0	Rate	142.24 Cum
	CULVERT		
	KSRB 2-2.1 : Earthwork excavation for foundation of buildings,		alaatriaal aanduita aith
	nits or in transhas 1 Fm and above in width in ardinany sail no		
	· · · · · · · · · · · · · · · · · · ·	ot exceeding 1.5 m. in depth inclu	ding dressing the bott
1	and sides of pits and trenches, stacking the excavated soil clear	from edges of excavation with le	ding dressing the bott
1	and sides of pits and trenches, stacking the excavated soil clear breaking of clods complete as per specifications. specification.	from edges of excavation with le	ding dressing the bott
1	and sides of pits and trenches, stacking the excavated soil clear	from edges of excavation with le	ding dressing the bott
1	and sides of pits and trenches, stacking the excavated soil clear breaking of clods complete as per specifications. specification.	from edges of excavation with le	ding dressing the bott
1	and sides of pits and trenches, stacking the excavated soil clear breaking of clods complete as per specifications. specification.	from edges of excavation with le	ding dressing the bott
1	and sides of pits and trenches, stacking the excavated soil clear breaking of clods complete as per specifications. specification. KSRB Pg No 5,SI No.2.3	from edges of excavation with le	ding dressing the bott ad upto 50 m. after
1	and sides of pits and trenches, stacking the excavated soil clear breaking of clods complete as per specifications. specification. KSRB Pg No 5,SI No.2.3 Basic rate	from edges of excavation with le	ding dressing the bott ad upto 50 m. after 189.00
1	and sides of pits and trenches, stacking the excavated soil clear breaking of clods complete as per specifications. specification. KSRB Pg No 5,SI No.2.3 Basic rate	from edges of excavation with le No. KBS 2.1(a) / 2.3.5	ding dressing the bott ad upto 50 m. after 189.00 22.68
1	and sides of pits and trenches, stacking the excavated soil clear breaking of clods complete as per specifications. specification. KSRB Pg No 5,SI No.2.3 Basic rate Add 12% For area weightage	from edges of excavation with le No. KBS 2.1(a) / 2.3.5	189.00 22.68 211.68 Cum
1	and sides of pits and trenches, stacking the excavated soil clear breaking of clods complete as per specifications. specification. KSRB Pg No 5,SI No.2.3 Basic rate Add 12% For area weightage KSRRB M2900- PCC 1:3:6 in Foundation KSRRB M2900-1. Plain of	from edges of excavation with le No. KBS 2.1(a) / 2.3.5 Rate cement concrete 1:3:6 mix with cr	ding dressing the bott ad upto 50 m. after 189.00 22.68 211.68 Cum
2	and sides of pits and trenches, stacking the excavated soil clear breaking of clods complete as per specifications. specification. KSRB Pg No 5,Sl No.2.3 Basic rate Add 12% For area weightage KSRRB M2900- PCC 1:3:6 in Foundation KSRRB M2900-1. Plain of m nominal size mechanically mixed, placed in foundation and complete the second size of the excavated soil clear breaking the excavated soil clear breaking of closes.	from edges of excavation with le No. KBS 2.1(a) / 2.3.5 Rate cement concrete 1:3:6 mix with cr	ding dressing the bott ad upto 50 m. after 189.00 22.68 211.68 Cum
	and sides of pits and trenches, stacking the excavated soil clear breaking of clods complete as per specifications. specification. KSRB Pg No 5,SI No.2.3 Basic rate Add 12% For area weightage KSRRB M2900- PCC 1:3:6 in Foundation KSRRB M2900-1. Plain of m nominal size mechanically mixed, placed in foundation and c specifications MORTH Specification No. 408	from edges of excavation with le No. KBS 2.1(a) / 2.3.5 Rate cement concrete 1:3:6 mix with cr	ding dressing the bott ad upto 50 m. after 189.00 22.68 211.68 Cum
	and sides of pits and trenches, stacking the excavated soil clear breaking of clods complete as per specifications. specification. KSRB Pg No 5,SI No.2.3 Basic rate Add 12% For area weightage KSRRB M2900- PCC 1:3:6 in Foundation KSRRB M2900-1. Plain of m nominal size mechanically mixed, placed in foundation and c specifications MORTH Specification No. 408 KSRB Pg No.253,SI No.34.1	from edges of excavation with le No. KBS 2.1(a) / 2.3.5 Rate cement concrete 1:3:6 mix with cr	ding dressing the bott ad upto 50 m. after 189.00 22.68 211.68 Cum rushed stone aggregat curing complete as pe
	and sides of pits and trenches, stacking the excavated soil clear breaking of clods complete as per specifications. specification. KSRB Pg No 5,SI No.2.3 Basic rate Add 12% For area weightage KSRRB M2900- PCC 1:3:6 in Foundation KSRRB M2900-1. Plain of m nominal size mechanically mixed, placed in foundation and c specifications MORTH Specification No. 408 KSRB Pg No.253,SI No.34.1 Basic rate	from edges of excavation with le No. KBS 2.1(a) / 2.3.5 Rate cement concrete 1:3:6 mix with cr	189.00 22.68 211.68 Cum rushed stone aggregat curing complete as pe
	and sides of pits and trenches, stacking the excavated soil clear breaking of clods complete as per specifications. specification. KSRB Pg No 5,SI No.2.3 Basic rate Add 12% For area weightage KSRRB M2900- PCC 1:3:6 in Foundation KSRRB M2900-1. Plain of m nominal size mechanically mixed, placed in foundation and c specifications MORTH Specification No. 408 KSRB Pg No.253,SI No.34.1	Rate Rement concrete 1:3:6 mix with crompacted by vibration including of	189.00 22.68 211.68 Cum rushed stone aggregat curing complete as pe
	and sides of pits and trenches, stacking the excavated soil clear breaking of clods complete as per specifications. specification. KSRB Pg No 5,SI No.2.3 Basic rate Add 12% For area weightage KSRRB M2900- PCC 1:3:6 in Foundation KSRRB M2900-1. Plain of m nominal size mechanically mixed, placed in foundation and c specifications MORTH Specification No. 408 KSRB Pg No.253,SI No.34.1 Basic rate	from edges of excavation with le No. KBS 2.1(a) / 2.3.5 Rate cement concrete 1:3:6 mix with cr	189.00 22.68 211.68 Cum rushed stone aggregat curing complete as pe
	and sides of pits and trenches, stacking the excavated soil clear breaking of clods complete as per specifications. specification. KSRB Pg No 5,SI No.2.3 Basic rate Add 12% For area weightage KSRRB M2900- PCC 1:3:6 in Foundation KSRRB M2900-1. Plain of m nominal size mechanically mixed, placed in foundation and c specifications MORTH Specification No. 408 KSRB Pg No.253,SI No.34.1 Basic rate Add 12% For area weightage	Rate Rate Rate Rate Rate Rate	189.00 22.68 211.68 Cum rushed stone aggregat curing complete as pe
	and sides of pits and trenches, stacking the excavated soil clear breaking of clods complete as per specifications. specification. KSRB Pg No 5,SI No.2.3 Basic rate Add 12% For area weightage KSRRB M2900- PCC 1:3:6 in Foundation KSRRB M2900-1. Plain of m nominal size mechanically mixed, placed in foundation and c specifications MORTH Specification No. 408 KSRB Pg No.253,SI No.34.1 Basic rate	Rate Rate Rate Rate Rate Rate	189.00 22.68 211.68 Cum rushed stone aggregat curing complete as pe
2	and sides of pits and trenches, stacking the excavated soil clear breaking of clods complete as per specifications. specification. KSRB Pg No 5,SI No.2.3 Basic rate Add 12% For area weightage KSRRB M2900- PCC 1:3:6 in Foundation KSRRB M2900-1. Plain of m nominal size mechanically mixed, placed in foundation and c specifications MORTH Specification No. 408 KSRB Pg No.253,SI No.34.1 Basic rate Add 12% For area weightage	Rate Rate Rate Rate Rate Cement concrete 1:3:6 mix with crompacted by vibration including of the compact o	189.00 22.68 211.68 Cum rushed stone aggregat curing complete as pe
	and sides of pits and trenches, stacking the excavated soil clear breaking of clods complete as per specifications. specification. KSRB Pg No 5,Sl No.2.3 Basic rate Add 12% For area weightage KSRRB M2900- PCC 1:3:6 in Foundation KSRRB M2900-1. Plain of m nominal size mechanically mixed, placed in foundation and c specifications MORTH Specification No. 408 KSRB Pg No.253,Sl No.34.1 Basic rate Add 12% For area weightage Providing and constructing granite / trap / basalt size stone ma	Rate Rate Rate Rate Rate Cement concrete 1:3:6 mix with crompacted by vibration including of the compact o	189.00 22.68 211.68 Cum rushed stone aggregat curing complete as pe
2	and sides of pits and trenches, stacking the excavated soil clear breaking of clods complete as per specifications. specification. KSRB Pg No 5,Sl No.2.3 Basic rate Add 12% For area weightage KSRRB M2900- PCC 1:3:6 in Foundation KSRRB M2900-1. Plain of m nominal size mechanically mixed, placed in foundation and c specifications MORTH Specification No. 408 KSRB Pg No.253,Sl No.34.1 Basic rate Add 12% For area weightage Providing and constructing granite / trap / basalt size stone ma hammerd dressed in courses not less than 20 cms high, bond stone and the stone mass of the sto	Rate Rate Rate Rate Rate Cement concrete 1:3:6 mix with crompacted by vibration including of the compact o	189.00 22.68 211.68 Cum rushed stone aggregat curing complete as pe
2	and sides of pits and trenches, stacking the excavated soil clear breaking of clods complete as per specifications. specification. KSRB Pg No 5,SI No.2.3 Basic rate Add 12% For area weightage KSRRB M2900- PCC 1:3:6 in Foundation KSRRB M2900-1. Plain of m nominal size mechanically mixed, placed in foundation and c specifications MORTH Specification No. 408 KSRB Pg No.253,SI No.34.1 Basic rate Add 12% For area weightage Providing and constructing granite / trap / basalt size stone ma hammerd dressed in courses not less than 20 cms high, bond si materials, labour, curing complete as per specifications. KBS 5.3	Rate Rate Rate Rate Rate Cement concrete 1:3:6 mix with crompacted by vibration including of the compact o	189.00 22.68 211.68 Cum rushed stone aggregate curing complete as per 4434.00 532.08 4966.08 Cum
2	and sides of pits and trenches, stacking the excavated soil clear breaking of clods complete as per specifications. specification. I KSRB Pg No 5,SI No.2.3 Basic rate Add 12% For area weightage KSRRB M2900- PCC 1:3:6 in Foundation KSRRB M2900-1. Plain of m nominal size mechanically mixed, placed in foundation and of specifications MORTH Specification No. 408 KSRB Pg No.253,SI No.34.1 Basic rate Add 12% For area weightage Providing and constructing granite / trap / basalt size stone mathemmerd dressed in courses not less than 20 cms high, bond simaterials, labour, curing complete as per specifications. KBS 5.2 KSRB Pg No.254,SI No.34.8.2 Basic Rate	Rate Rate Rate Rate Rate Cement concrete 1:3:6 mix with crompacted by vibration including of the compact o	189.00 22.68 211.68 Cum rushed stone aggregat curing complete as per 4434.00 532.08 4966.08 Cum mortar 1:6 stone are including cost of
2	and sides of pits and trenches, stacking the excavated soil clear breaking of clods complete as per specifications. specification. KSRB Pg No 5,Sl No.2.3 Basic rate Add 12% For area weightage KSRRB M2900- PCC 1:3:6 in Foundation KSRRB M2900-1. Plain of m nominal size mechanically mixed, placed in foundation and of specifications MORTH Specification No. 408 KSRB Pg No.253,Sl No.34.1 Basic rate Add 12% For area weightage Providing and constructing granite / trap / basalt size stone mathemmerd dressed in courses not less than 20 cms high, bond signaterials, labour, curing complete as per specifications. KBS 5.2 KSRB Pg No.254,Sl No.34.8.2	Rate Rate Rate Rate Rate Cement concrete 1:3:6 mix with crompacted by vibration including of the compact o	189.00 22.68 211.68 Cum rushed stone aggregate curing complete as per 4434.00 532.08 4966.08 Cum

	Basic Rate		189.00	
	KSRB Pg No.5,SI No.2.3			
	lead and lift including danger lighting wherever necessar	ary as directed in the following strata.		
_	selected earth for foundation and disposing off excess		neer etc. complet	e with a
1	complete as per specifications including clearing vegeta	· · · · · · · · · · · · · · · ·	_	
	pits and trenches, stacking the excavated soil clear from		-	
	trenches 1.5m and above in width, in Ordinary Soil not			
	Earthwork excavation for foundation of buildings, water	I er_supply . sanitary lines and electrical co	onduits either in r	oits or in
	RCC DRAINS			
		Rate	142.24	Cum
	Add 12% For Area weightage		15.24	
	Sub Total		127.00	
	Basic Rate		127.00	
	including cost of all labour complete as per specificatio KSRB Pg No.6,SI No.2.10	nis. specification No. NBS 2.9		
8	20cms. In depth, compacting each deposited layer by r		Um. and lift upto	1.5m.
	KSRB 2.3: Filling available excavated earth (excluding ro			
	3 0-	Rate	3099.04	Rmt
	Add 12% For Area weightage		332.04	
	Sub Total		2767.00	
	Basic Rate		2767	
,	1000, 2300 MOST Specification No.1000 / 2300 4500 KSRB Pg No.253,SI No.34.6.2	mm. dia		
7	cement mortar 1:2 including cost of all materials, labou		. Specifications. N	o. KSRB
	Providing and laying reinforced cement concrete pipe N	NP3 for culverts including pointing ends,	and fixing collars	with
		Rate	1772.96	Rmt
	Add 12% For Area weightage		189.96	
	Sub Total		1583.00	
	Basic Rate		1583	
	KSRB Pg No.253,SI No.34.6.1			ı
6	1000, 2300 MOST Specification No.1000 / 2300 300i	mm. dia		
c	cement mortar 1:2 including cost of all materials, labou		_	
	Providing and laying reinforced cement concrete pipe I	NP3 for culverts including pointing ends,	and fixing collars	with
		Rate	108.64	Sqm
	Add 12% For Area weightage	B-1-	11.64	C
	Sub Total		97.00	
	Basic Rate		97.00	
	KSRB Pg No.254,Sl No.34.12.1			ı
	- do - cement mortar 1:4			
5	labour, curing complete as per specifications.			
	masonry with cement mortar, 20mm deep, after raking	g joints to depth of 20mm nicely lining, i	ncluding cost of m	naterial
	Providing flush pointing to square rubble, course or un			
		Rate	5605.60	cum
	Add 12% For Area weightage	Bata	600.6	C
	Basic Rate		5005.00	
	KSRB Pg No.254,Sl No.34.9			
	each course including cost of materials, labour, curing	complete as per specifications.		

		with OPC cement @ 240kgs		down size
	Providing and laying in position plain cement concrete of mix 1:2:4 graded granite metal coarse aggregates @0.878cum and fine aggregates	egates @0.459cum machine r	nixed, concrete l	aid in
2	layers not exceeding 15 cms thick, well compacted in foundation,p HOM of machineries, curing complete as per specifications.	linth and cills, including cost o	of all materials, la	abour,
	KSRB Pg No 12,SI No.4.1			
	Basic Rate		5213.00	
	Sub Total		5213.00	
	Add 12% For Area weightage		625.56	
	7.66 22/01/01/11/00 11/01/01/05	Rate	5838.56	Cum
3	Providing and laying in position reinforced cement concrete of des and down size graded granite metal coarse aggregates @0.70 cum @ 3 liters conforming to IS 9103-1999 reafirmed-2008 at machine thick, vibrated for all works in foundation for footings, pedestrals, including attached pilasters, columnspillars, posts, struts, buttress of all materials, labour, HOM of machinery, curing, complete but ex KSRB Pg No.13,SI NO.4.10	and fine aggregates @ 0.47c mixed, concrete laid in layers retaining walls, returnwalls, v es, bed blocks, anchor blocks	um, with super p not exceeding 1 valls (any thickne & plinths etc inc	lasticisers 5 cms ess) luding cost
	Basic Rate		6221.00	
	Sub Total		6221.00	
	Add 12% For Area weightage		746.52	
	A TENTO A TENTO A TENTO WEIGHTUBE	Rate	6967.52	Cum
		Rate	0307.32	Culli
4	necessary complete as per design (laps and wastage shall not be m machinery complete with all lead lifts and as per specifications and			
4	machinery complete with all lead lifts and as per specifications and KSRB Pg No.17,SI No.4.46.2 Rev.		arge. FE 500	
4	machinery complete with all lead lifts and as per specifications and KSRB Pg No.17,Sl No.4.46.2 Rev. Basic Rate		60607.00	
4	machinery complete with all lead lifts and as per specifications and KSRB Pg No.17,Sl No.4.46.2 Rev. Basic Rate Sub Total		60607.00 60607.00	
4	machinery complete with all lead lifts and as per specifications and KSRB Pg No.17,Sl No.4.46.2 Rev. Basic Rate	l directinon of Engineer-in-Ch	60607.00 60607.00 7272.84	MT
4	machinery complete with all lead lifts and as per specifications and KSRB Pg No.17,SI No.4.46.2 Rev. Basic Rate Sub Total Add 12% For Area weightage	I directinon of Engineer-in-Ch	60607.00 60607.00 7272.84 67879.84	
5	machinery complete with all lead lifts and as per specifications and KSRB Pg No.17,Sl No.4.46.2 Rev. Basic Rate Sub Total	Rate	60607.00 60607.00 7272.84 67879.84	
	machinery complete with all lead lifts and as per specifications and KSRB Pg No.17,SI No.4.46.2 Rev. Basic Rate Sub Total Add 12% For Area weightage Providing and removing, centering, shuttering, strutting, propping 6 bases of columns for mass concrete including cost of all materials,	Rate	60607.00 60607.00 7272.84 67879.84	
	machinery complete with all lead lifts and as per specifications and KSRB Pg No.17,SI No.4.46.2 Rev. Basic Rate Sub Total Add 12% For Area weightage Providing and removing,centering, shuttering, strutting, propping e bases of columns for mass concrete including cost of all materials, KSRB Pg No.15,SI No.4.28	Rate	60607.00 60607.00 7272.84 67879.84 rk for foundation fications.	
	machinery complete with all lead lifts and as per specifications and KSRB Pg No.17,SI No.4.46.2 Rev. Basic Rate Sub Total Add 12% For Area weightage Providing and removing,centering, shuttering, strutting, propping e bases of columns for mass concrete including cost of all materials, KSRB Pg No.15,SI No.4.28 Basic Rate	Rate	60607.00 60607.00 7272.84 67879.84 rk for foundation fications. 231.00 231.00	s, footings
	machinery complete with all lead lifts and as per specifications and KSRB Pg No.17,SI No.4.46.2 Rev. Basic Rate Sub Total Add 12% For Area weightage Providing and removing,centering, shuttering, strutting, propping 6 bases of columns for mass concrete including cost of all materials, KSRB Pg No.15,SI No.4.28 Basic Rate Sub Total	Rate	60607.00 60607.00 7272.84 67879.84 rk for foundation fications.	s, footings,
	machinery complete with all lead lifts and as per specifications and KSRB Pg No.17,SI No.4.46.2 Rev. Basic Rate Sub Total Add 12% For Area weightage Providing and removing,centering, shuttering, strutting, propping 6 bases of columns for mass concrete including cost of all materials, KSRB Pg No.15,SI No.4.28 Basic Rate Sub Total	Rate etc., and removal of form worlabour complete as per speci	60607.00 60607.00 7272.84 67879.84 rk for foundation fications. 231.00 231.00 27.72 258.72	s, footings, Sqm face such
5	machinery complete with all lead lifts and as per specifications and KSRB Pg No.17,SI No.4.46.2 Rev. Basic Rate Sub Total Add 12% For Area weightage Providing and removing,centering, shuttering, strutting, propping 6 bases of columns for mass concrete including cost of all materials, KSRB Pg No.15,SI No.4.28 Basic Rate Sub Total Add 12% For Area weightage Providing and removing centering, shuttering, strutting, propping 6 as walls at any thickness, including attached pilasters, buttresses p complete as per specifications.	Rate etc., and removal of form worlabour complete as per speci	60607.00 60607.00 7272.84 67879.84 rk for foundation fications. 231.00 231.00 27.72 258.72	s, footings, Sqm face such
5	machinery complete with all lead lifts and as per specifications and KSRB Pg No.17,Sl No.4.46.2 Rev. Basic Rate Sub Total Add 12% For Area weightage Providing and removing,centering, shuttering, strutting, propping et bases of columns for mass concrete including cost of all materials, KSRB Pg No.15,Sl No.4.28 Basic Rate Sub Total Add 12% For Area weightage Providing and removing centering, shuttering, strutting, propping et as walls at any thickness, including attached pilasters, buttresses promplete as per specifications. KSRB Pg No.15,Sl No.4.31	Rate etc., and removal of form worlabour complete as per speci	60607.00 60607.00 7272.84 67879.84 rk for foundation fications. 231.00 231.00 27.72 258.72 rk for vertical sur	s, footings, Sqm face such
5	machinery complete with all lead lifts and as per specifications and KSRB Pg No.17,Sl No.4.46.2 Rev. Basic Rate Sub Total Add 12% For Area weightage Providing and removing,centering, shuttering, strutting, propping e bases of columns for mass concrete including cost of all materials, KSRB Pg No.15,Sl No.4.28 Basic Rate Sub Total Add 12% For Area weightage Providing and removing centering, shuttering, strutting, propping e as walls at any thickness, including attached pilasters, buttresses p complete as per specifications. KSRB Pg No.15,Sl No.4.31 Basic Rate	Rate etc., and removal of form worlabour complete as per speci	60607.00 60607.00 7272.84 67879.84 rk for foundation fications. 231.00 231.00 27.72 258.72 rk for vertical sur-	s, footings, Sqm face such
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	KSRRB M2200 - Providing Weep holes Providing weep holes in Brick mason	•		
	wall / return wall with PVC 90mm outer dia pipe 2 kg / Sqcm, extending thr	-		•
8	of 1V:20H towards drawing force complete as per drawing and Technical sp	ecifications comp	olete as per specifica	ations.
	KSRB,Pg No.225,SI No.28.10			
	Paria Pata		160.00	I
	Basic Rate		168.00	
	Less cost of Material (AC Pipe)		-50.00	
	Sub Total		118.00	
	Add Cost of PVC 90mm outer dia pipe 2 kg / Sqcm		135.00	
			253.00	
	Add 12% For Area weightage		30.36	
		Rate	283.36	Rmt
9	Providing and laying of filter media with granular materials/stone crushed a in clause 2500.4.2.2 of morth specification to a thickness not less than 600 bigger size towards the wall and provided over the entire surface behind the hight compacted to afirm condition complete as per drawing and technical KSRB.Pg No.225.SI No.28.13	mm with smaller ne abutment,wing	size to wards the so	il and
9	in clause 2500.4.2.2 of morth specification to a thickness not less than 600 to bigger size towards the wall and provided over the entire surface behind the hight compacted to afirm condition complete as per drawing and technical KSRB,Pg No.225,SI No.28.13	mm with smaller ne abutment,wing	size to wards the so g wall and return wa	il and Ill to full
9	in clause 2500.4.2.2 of morth specification to a thickness not less than 600 obligger size towards the wall and provided over the entire surface behind the hight compacted to afirm condition complete as per drawing and technical KSRB,Pg No.225,SI No.28.13 Basic Rate	mm with smaller ne abutment,wing	size to wards the so g wall and return wa 1296.00	il and Ill to full
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9	in clause 2500.4.2.2 of morth specification to a thickness not less than 600 obligger size towards the wall and provided over the entire surface behind the hight compacted to afirm condition complete as per drawing and technical KSRB,Pg No.225,SI No.28.13 Basic Rate	mm with smaller ne abutment,wing specification	1296.00 155.52	il and ill to full
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9	in clause 2500.4.2.2 of morth specification to a thickness not less than 600 or bigger size towards the wall and provided over the entire surface behind the hight compacted to afirm condition complete as per drawing and technical KSRB,Pg No.225,SI No.28.13 Basic Rate Sub Total Add 12% For Area weightage KSRB 2.3: Filling available excavated earth (excluding rock) in sides of found 20cms. In depth, compacting each deposited layer by ramming after watering and the surface of the	mm with smaller ne abutment, wing specification Rate ations upto plintl ng with lead upto	1296.00 1296.00 155.52 1451.52	cum
	in clause 2500.4.2.2 of morth specification to a thickness not less than 600 or bigger size towards the wall and provided over the entire surface behind the hight compacted to afirm condition complete as per drawing and technical KSRB,Pg No.225,SI No.28.13 Basic Rate Sub Total Add 12% For Area weightage KSRB 2.3: Filling available excavated earth (excluding rock) in sides of foundations.	mm with smaller ne abutment, wing specification Rate ations upto plintl ng with lead upto	1296.00 1296.00 155.52 1451.52	cum
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	in clause 2500.4.2.2 of morth specification to a thickness not less than 600 or bigger size towards the wall and provided over the entire surface behind the hight compacted to afirm condition complete as per drawing and technical KSRB,Pg No.225,SI No.28.13 Basic Rate Sub Total Add 12% For Area weightage KSRB 2.3: Filling available excavated earth (excluding rock) in sides of found 20cms. In depth, compacting each deposited layer by ramming after watering including cost of all labour complete as per specifications. Specification No. KSRB Pg No.6,SI No.2.10 Basic Rate	mm with smaller ne abutment, wing specification Rate ations upto plintl ng with lead upto	1296.00 1296.00 155.52 1451.52 n in layers not excee	Cum eding 1.5m.

Executive Engineer MSCL Mangaluru

GM Technical MSCL Mangaluru

MANGALURU SMART CITY

1.8 Rate Analysis of Underground Drainage Zone 3 Part 2

Electrical Rate Analysis for pole shifting work in Under Ground Drainage System

RA No.	Description	SR	Ref	Unit	Basic	Labour/lead/ lift/dewateri ng/MISC etc.,	Locality Allowance @ 45% on labour	Total	Remarks
1	Releasing and erection of 9 metre RCC poles including transportation to work site with all lead from factory and head load from the nearest road; digging a pit to a depth up to of 1.8 mtr giving coating of colour, aligning it, refilling the soil removed, complete for each pole, for a average span of maximum 50mtres as per KPTCL rules.(Including all lead and Lift)	MESCOM -SR 2016-17	11kv Materials and labour cost S.No.1,(b)	Nos					
	Releasing of 9 mtr RCC pole is 90%of erection ie 1060*90%					954.00			
	Erection of 9 mtr RCC pole is 1060					1060.00			
						2014.00	906.3	2,920.30	
	Grand Total							2,920.30	
2	Supply and erection of 9 metre RCC poles(using Tor50 12mm dia steel), including transportation to work site with all lead from factory and head load from the nearest road; digging a pit to a depth up to of 1.8 mtr giving coating of colour, aligning it, refilling the soil removed, complete for each pole, for a average span of maximum 50mtres as per KPTCL rules.(Including all lead and Lift)	MESCOM -SR 2016-17	11kv Materials and labour cost S.No.1,(b)	Nos	5,941.00	1060.00	477	7,478.00	
	Grand Total							7,478.00	
	Releasing of deteriorated 9mtr RCC poles and handing over the unused materials to MESCOM including all lead and lift.	MESCOM -SR 2016-17	11kv Materials and labour cost S.No.1,(b)	Nos					
3	Releasing of 9 mtr RCC pole is 90% of erection ie 1060* 90%					954.00			
	Transpotation 2% on material ie 5941*2%					118.82			
						1072.82	482.769	1,555.59	
	Grand Total							1,555.59	
4	Releasing and erection of 11 Mtr ISMB poles including transportation to work site with all lead from factory and head load from the nearest road; digging a pit to a depth up to of 1.8 mtr giving coating of colour, aligning it, refilling the soil removed, complete for each pole, for a average span of maximum 50mtres as per KPTCL rules.(Including all lead and Lift)	MESCOM -SR 2016-17	11kv labour cost SI .No.55 item No.2.6	Nos					
	Releasing of 9 mtr RCC pole is 90% of erection ie 1088*90%					979.20			
	Erection of 9 mtr RCC pole is 1088					1088.00			
						2067.20	930.24	2,997.44	
	Grand Total							2,997.44	

RA No.	Description	SR	Ref	Unit	Basic	Labour/lead/ lift/dewateri ng/MISC etc.,	Locality Allowance @ 45% on labour	Total	Remarks
5	Supply and erection of 11 metre ISMB,200X100mm Size including transportation to work site with all lead from factory and head load from the nearest road; digging a pit to a depth up to of 1.8 mtr giving coating of colour, aligning it, refilling the soil removed, complete for each pole, for a average span of maximum 50mtres as per KPTCL rules.(Including all lead and Lift)	MESCOM -SR 2016-17	stock material SI No.14 item No.1.14,11kv labour cost SI .No.55 item No.2.6	Nos	15,657.00	1088.00	489.6	17,234.60	
	Grand Total							17,234.60	
6	Pole base concretiong: supplying and construction 9mtr RCC pole concreting including all materials and labour, shuttering including all lead and lift size:500*650*150mm 1:4:8	MESCOM -SR 2016-17	11kv Materials and labour cost S.No.XXIX,(a)	Each	229.00			229.00	
	Grand Total							229.00	
7	Pole base concretiong : supplying and construction 11mtr ISMB pole concreting including all materials and labour , shuttering including all lead and lift size:500*650*150mm	MESCOM -SR 2016-17	11kv Materials and labour cost S.No.XXIX,(c)	Each	704.00			704.00	
	Grand Total							704.00	
8	Pole concretiong : supplying and construction 9mtr RCC pole concreting including all materials and labour , shuttering including all lead and lift size:650*500*1700mm 1:2:4	MESCOM -SR 2016-17	11kv Materials and labour cost S.No.XXIX,(a)	Each	2,566.00			2,566.00	
	Grand Total							2,566.00	
9	Pole concretiong: supplying and construction 11mtr ISMB pole concreting including all materials and labour, shuttering including all lead and lift size:650*500*2000mm 1:2:4	MESCOM -SR 2016-17	11kv Materials and labour cost S.No.XXIX,(c)	Each	2,721.00			2,721.00	
	Grand Total							2,721.00	
	Releasing and refixing of 11kv Horizontal cross arm with HT Single top support , clamps, bolts, nuts and washers including all lead and lift and MESCOM Norms.	MESCOM -SR 2016-17	11kv Materials and labour cost S.No.VIII,(a)	set					
10	Releasing 90% of erection ie is 99*90%					89.10			
	Erection is 88					99.00			
						188.10	84.645	272.75	
	Grand Total							272.75	
11	Supplying and and fixing of 11kv Horizontal cross arm with HT Single top support , clamps, bolts, nuts and washers including all lead and lift and MESCOM Norms.	MESCOM -SR 2016-17	11kv Materials and labour cost S.No.VIII,(a)	set	382.00	99.00	44.55	525.55	
	Grand Total							525.55	

RA No.	Description	SR	Ref	Unit	Basic	Labour/lead/ lift/dewateri ng/MISC etc.,	Locality Allowance @ 45% on labour	Total	Remarks
	'Releasing of deteriorated HT cross arms and handing over the unused materials to MESCOM including all lead and lift.	MESCOM -SR 2016-17	11kv Materials and labour cost S.No.VIII,(a)	set					
42	Releasing 90% of erection ie is 99*90%		, ,			89.10			
12	Transpotation 2% on material ie 382*2%					7.64			
						96.74	43.533	140.27	
	Grand Total							140.27	
	Releasing and fixing of 4 pin LT Horizontal cross arms, fabricated out of mild steel structure steel as per KPTCL standards complete set with all fixing accessories like bolt, nuts, washers, pole clamps etc., including all necessary lead and lift.	MESCOM -SR 2016-17	11kv Materials and labour cost S.No.X(a)	set					
13	Releasing 90% of erection ie is 96*90%					86.40			
	erection-85					96.00			
						182.40	82.08	264.48	
	Grand Total							264.48	
14	Supply and fixing of 4 pin LT horizontal cross arms, fabricated out of mild steel structure steel as per KPTCL standards complete set with all fixing accessories like bolt, nuts, washers, pole clamps etc., including all necessary lead and lift.	MESCOM -SR 2016-17	11kv Materials and labour cost S.No.X(a)	set	263.00	96.00	43.2	402.20	
	Grand Total							402.20	
	'Releasing of deteriorated 4 pin cross arms and handing over the unused materials to MESCOM including all lead and lift.	MESCOM -SR 2016-17	11kv Materials and labour cost S.No.X(a)	set					
15	Releasing 90% of erection ie is 96*90%					76.50			
	Transpotation 2% on material ie 263*2%					5.26			
	Total					81.76	36.79	118.55	
	Grand Total							118.55	

RA No.	Description	SR	Ref	Unit	Basic	Labour/lead/ lift/dewateri ng/MISC etc.,	Locality Allowance @ 45% on labour	Total	Remark
16	Releasing and fixing of Guy sets with break insulators, steel rope, turn buckle and anchoring arrangements with necessary earth work excavation, providing and laying of concrete inclduing curing etc. complete as per KPTCL specification and rules.(including all lead and lift)	MESCOM -SR 2016-17	11kv Materials and labour cost S.No.XVIII,(b)	set					
16	Releasing 90% of erection ie is 374*90%					336.60			
	erection ie is 374					374.00			
						710.60	319.77	1,030.37	
	Grand Total							1,030.37	
17	Supply and fixing of Guy sets with break insulators, steel rope, turn buckle and anchoring arrangements with necessary earth work excavation, providing and laying of concrete inclduing curing etc. complete as per KPTCL specification and rules.(including all lead and lift)	MESCOM -SR 2016-17	11kv Materials and labour cost S.No.XVIII,(b)	set	775.00	374.00	168.3	1,317.30	
	Grand Total							1,317.30	
	Releasing and restringing of HT conductor and handing over the unused materials to MESCOM including all lead and lift	MESCOM -SR 2016-176	11kv Materials and labour cost S.No.XVI,(b)	KM					
18	Releasing 90% of stringing ie is 2608* 90%					2347.20			
10	stringing ie is 2608					2608.00			
						4955.20	2229.84	7,185.04	
	Grand Total							7,185.04	
19	Supplying and stringing of ACSR (Rabbit) conductor for Jumps, including all necessary binding to the insulator (Cost to include all materials for accessories) including necessary lead and lifts as per KPTCL specification .(including all lead and lift)	MESCOM -SR 2016-17	11kv Materials and labour cost S.No.XVI,(b)	KM	33,676.00	2608.00	1173.6	37,457.60	
	Grand Total							37,457.60	
	Releasing and restringing of LT conductor and handing over the unused materials to MESCOM including all lead and lift	MESCOM -SR 2016-17	11kv Materials and labour cost S.No.XVI,(a)	KM					
20	Releasing 90% of stringing ie is 1913* 90%					1721.70			
20	stringing ie is 1913					1913.00			
						3634.70	1635.615	5,270.32	
	Grand Total							5,270.32	
21	Supplying and restringing of LT conductor and handing over the unused materials to MESCOM including all lead and lift	MESCOM -SR 2016-17	11kv Materials and labour cost S.No.XVI,(a)	KM	20,100.00	1913.00	860.85	22,873.85	
	Grand Total							22,873.85	

RA No.	Description	SR	Ref	Unit	Basic	Labour/lead/ lift/dewateri ng/MISC etc.,	Locality Allowance @ 45% on labour	Total	Remarks
22	Supplying and fixing of 11 KV class pin insulators and GI pin and nut as per KPTCL rules and specifications(including all lead and lift)	MESCOM -SR 2016-17	11kv Materials and labour cost S.No.XV,(a)	Nos	94.00			94.00	
	Grand Total							94.00	
23	Supplying and fixing of 1.1 KV class pin insulators and GI pin and nut as per KPTCL rules and specifications(including all lead and lift)	MESCOM -SR 2016-17	11kv Materials and labour cost S.No.XV,(d)	Nos	38.00			38.00	
	Grand Total							38.00	
24	Supplying and fixing of No 8 strain insulators as per KPTCL rules and specifications. (Including all lead and lift)	MESCOM -SR 2016-17	11kv Materials and labour cost S.No.XV,(c)	Nos	14.00			14.00	
	Grand Total							14.00	
25	Supplying and fixing of 11 KV Disc insulator (45KN) including fixing accessories such as clamps,bolts and nuts etc as per KPTCL specifications(including all lead and lift)	MESCOM -SR 2016-17	11kv Materials and labour cost S.No.XV,(e)	Nos	290.00			290.00	
	Grand Total							290.00	
26	Releasing and Replacing 11kv Pin insulator	MESCOM -SR 2016-17	11kv Labour portion S.No.58 item No.2.9	Nos		28.00	12.6	40.60	
	Grand Total							40.60	
27	Releasing and Replacing dead end disc 45kn insulator	MESCOM -SR 2016-17	11kv Labour portion S.No.58 item No.2.10	Nos		34.00	15.3	49.30	
	Grand Total							49.30	
	Releasing , erection , transportation upto site of DP structure using 9mtr long RCC pole and accessories such as cross arms, brace arms(Horizontal & cross member), strain plates, civil works, channels, Angles, bolts, nuts etc including all lead and lift.	MESCOM -SR 2016-17	11kv Materials and labour cost S.No.V,(a)	set					
28	Releasing of 9 mtr RCC DP is 90% of erection ie 3252*90%					2926.80			
	Erection of 9 mtr RCC DP is 3252					3252.00			
	Grand Total					6178.80	2780.46	8,959.26 8,959.26	

RA No.	Description	SR	Ref	Unit	Basic	Labour/lead/ lift/dewateri ng/MISC etc.,	Locality Allowance @ 45% on labour	Total	Remarks
29	Supply, erection , transportation upto site of DP structure using 9mtr RCC pole and accessories such as cross arms, brace arms(Horizontal & cross member), strain plates, civil works, channels, Angles, bolts, nuts etc including all lead and lift.	MESCOM -SR 2016-17	11kv Materials and labour cost S.No.V,(a)	set	15,910.00	3252.00	1463.4	20,625.40	
	Grand Total							20,625.40	
	Releasing of Transformer DP structure and handing over the unused materials to MESCOM including all lead and lift.	MESCOM -SR 2016-17	11kv Materials and labour cost S.No.VII,1(a)	set					
30	Releasing is 90% of erection ie 4115*90%					3703.50			
30	Transpotation 2% on material ie 19271*2%					385.42			
						4088.92	1840.014	5,928.93	
	Grand Total							5,928.93	
	'Releasing and Re-errection of 63KVA Transformer along with Distribution box ,associated equipment of the transfomer centre and handing over the unused materials to MESCOM including all lead and lift.	MESCOM SR2016-17 COST DATA SHEETS	11kv Materials and labour cost S.No.25a	per unit					
31.1	Releasing is 90% of erection ie 11078* 90%					9970.20			
	Erection-10014					10014.00			
						19984.20	8992.89	28,977.09	
	Grand Total							28,977.09	
	Releasing and Re-errection of released 63 kVA transformer in temperary location and shifting the same back to original loacation after completion of pipe line work along with associated equipment of the transformer centre as per Dgr NoKEB/SIC / WS/022/date :12.9.86 and handing over the unused released materials to MESCOM including all lead and lift.	MESCOM SR2016-17 COST DATA SHEETS	11kv Materials and labour cost S.No.25a	per unit					
31.2	Releasing is 90% of erection ie 11078* 90%x2					19940.40			
	Erection-10014*2					20028.00			
						39968.40	17985.78	57,954.18	
	Grand Total							57,954.18	
	'Releasing and Re-errection of 100KVA Transformer along with Distribution box ,associated equipment of the transfomer centre and handing over the unused materials to MESCOM including all lead and lift.	MESCOM SR20164-17 COST DATA SHEETS	11kv Materials and labour cost S.No.26a(iii)	per unit					
32.1	Releasing is 90% of erection ie 11679* 90%					10511.10			
	Erection-11679					11679.00			
						22190.10	9985.545	32,175.65	
	Grand Total							32,175.65	

RA No.	Description	SR	Ref	Unit	Basic	Labour/lead/ lift/dewateri ng/MISC etc.,	Locality Allowance @ 45% on labour	Total	Remarks
32.2	Releasing and Re-errection of released 100 kVA transformer in temperary location and shifting the same back to original loacation after completion of pipe line work along with associated equipment of the transfomer centre as per Dgr NoKEB/SIC / WS/022/date :12.9.86 and handing over the unused released materials to MESCOM including all lead and lift.	MESCOM SR20164-17 COST DATA SHEETS	11kv Materials and labour cost S.No.26a(iii)	per unit					
32.2	Releasing is 90% of erection ie 11679* 90%*2					21022.20			
	Erection-11679*2					23358.00			
						44380.20	19971.09	64,351.29	
	Grand Total							64,351.29	
33.1	'Releasing and Re-errection of 250KVA Transformer along with Distribution box ,associated equipment of the transfomer centre and handing over the unused materials to MESCOM including all lead and lift.	MESCOM SR2016-17 COST DATA SHEETS	11kv Materials and labour cost S.No.27a	per unit					
	Releasing is 90% of erection ie 10971* 90%					9873.90			
	Erection-10971					10971.00			
						20844.90	9380.205	30,225.11	
33.2	Releasing and Re-errection of released 250 kVA transformer in temperary location and shifting the same back to original loacation after completion of pipe line work along with associated equipment of the transfomer centre as per Dgr NoKEB/SIC / WS/022/date :12.9.86 and handing over the unused released materials to MESCOM including all lead and lift.	MESCOM SR2016-17 COST DATA SHEETS	11kv Materials and labour cost S.No.27a	per unit					
	Releasing is 90% of erection ie 10971* 90%*2					19747.80			
	Erection-10971*2					21942.00			
						41689.80	18760.41	60,450.21	
	Grand Total							60,450.21	
	Releasing and Refixing of 200A Single Break GOS and handing over the unused materials to MESCOM including all lead and lift.	MESCOM -SR 2016-17	11kv Materials and labour cost S.No.XXIV(a)	set					
34	Releasing is 90% of erection ie 636* 90%					572.40			
	Erection-563					636.00			
						1208.40	543.78	1,752.18	
	Grand Total							1,752.18	
	Releasing and Refixing of HG Fuse Unit and handing over the unused materials to MESCOM including all lead and lift.	MESCOM -SR 2016-17	11kv Materials and labour cost S.No.XXV	set					
35	Releasing is 90% of erection ie 423*90%					380.70			
	Erection-375					423.00			
						803.70	361.665	1,165.37	

RA No.	Description	SR	Ref	Unit	Basic	Labour/lead/ lift/dewateri ng/MISC etc.,	Locality Allowance @ 45% on labour	Total	Remarks
	Grand Total							1,165.37	
	Releasing and Refixing of Lightning Arrestors and handing over the unused materials to MESCOM including all lead and lift.	MESCOM -SR 2016-17	11kv Materials and labour cost S.No.XXVIII (ii)	set					
36	Releasing is 90% of erection ie 71*90%					63.90			
	Erection-71					71.00			
						134.90	60.705	195.61	
	Grand Total							195.61	
	Releasing and Refixing of LT Protection Kit and handing over the unused materials to MESCOM including all lead and lift.	MESCOM -SR 2016-17	Cost data sheet 26 S.No.17(a)	set					
27	Releasing is 90% of erection ie 410*90%					369.00			
37	Erection-410					410.00			
						779.00	350.55	1,129.55	
	Grand Total							1,129.55	
	Releasing and Refixing of Distribution Box and handing over the unused materials to MESCOM including all lead and lift.	MESCOM -SR 2016-17	Cost data sheet 26 S.No.17(b)	set					
	Releasing is 90% of erection ie 455*90%					409.50			
38	Erection-455					455.00			
						864.50	389.025	1,253.53	
	Grand Total							1,253.53	
	Releasing and refixing street light fitting including wiring and testing the connection and proper function of the fitting including all lead and lift as per MESCOM /MCC norms	MESCOM -SR 2016-17	11kv Materials and labour cost S.No.163-16.2	sset					
39	Releasing is 90% of fixing ie 176*90%					158.40			
	Fixing-176					176.00			
						334.40	150.48	484.88	
	Grand Total							484.88	
40	Releasing and reconnection of House service connection ,fixing PVC pipe for taking the leads from the conductor to the pole fuse board or line conductor (including taking the lead wire inside the pvc pipe & giving connection to the overhead line & pole fuse box/ fuse board including all lead and lift as per MESCOM Norms	MESCOM -SR 2016-17	11kv Materials and labour cost S.No.152-14.11	set					
40	Releasing is 90% of fixing ie 131*90%					117.90			
	Fixing-131					131.00			
						248.90	112.005	360.91	
	Grand Total							360.91	

RA No.	Description	SR	Ref	Unit	Basic	Labour/lead/ lift/dewateri ng/MISC etc.,	Locality Allowance @ 45% on labour	Total	Remarks
41	Supplying and fixing 2.5m long 40mm dia GI earth electrode for DP structures, with necessary salt and charcoal, excavation for the pits, masonary chamber with cover all as specified in IS 3043 and drawing including 10SWg GI wire with all lead and lift.	MESCOM -SR 2016-17	11kv Materials and labour cost S.No.XXVIII(a)	per electrod e	1,227.00	573.00	257.85	2,057.85	
	Grand Total							2,057.85	
42	Releasing and stringing of 1.1kv grade aerial bunched 3/2 core cable of XLPE insulation stranded aluminium conductor stranded around a weather resistant black XLPE insulated AAA Messenger wire 3*95 for phase conductor and 1*70 is neutral and 1*16 street light including all lead and lift as mescom/MCC norms	MESCOM -SR 2016-17	11kv Labour portion S.No.308 item No.46.3	Km					
42	Releasing is 90% of fixing ie 20426*90%					18383.40			
	Stringing-20426					20426.00			
						38809.40	17464.23	56,273.63	
	Grand Total							56,273.63	
	Supplying and fixing of guarding materials for HT & LT and P & T cum road guard etc., complete as per IE/KPTCL Rules & Specifications complete with all necessary accessories. (including all lead and lift)	MESCOM -SR 2016-17	11kv Materials and labour cost S.No.XVIII(c)	set					
43	Releasing 90% of erection-1059*90%					953.10			
	erection-1059					1059.00			
						2012.10	905.445	2,917.55	
	Grand Total							2,917.55	
44	Supplying and fixing of guarding materials for HT & LT and P & T cum road guard etc., complete as per IE/KPTCL Rules & Specifications complete with all necessary accessories. (including all lead and lift)	MESCOM -SR 2016-17	11kv Materials and labour cost S.No.XVIII(c)	Mtr	3,400.00	1059.00	476.55	4,935.55	
	Grand Total							4,935.55	
	Releasing and relaing follwing size of Under ground cable of house service connection including termination and testing of proper function including all lead and lift	MESCOM -SR 2016-17	11kv Labour portion S.No.262 item No.35.1	km					
	2.5 to 25sqmm 2C/4C Aluminiumn cable								
45	Releasing is 90% laying=12774*90%					11496.60			
	laying=11304					12774.00			
						24270.60	10921.77	35,192.37	
	Grand Total							35,192.37	
46	Supplying and fixing straight through jointing kit suitable for $1.1 \mathrm{kv}$ class LT UG cable including all lead and lift as per MESCOM Norms including all lead and lift								
	10/16sqmm	PWD SR 2014-15	Page No 63 item No.7.15.2	kit	1,327.00			1,327.00	
46.1	Grand Total							1,327.00	
46.2	25/35sqmm	PWD SR 2014-15	Page No 63 item No.7.15.3	kit	1,604.00			1,604.00	

RA No.	Description	SR	Ref	Unit	Basic	Labour/lead/ lift/dewateri ng/MISC etc.,	Locality Allowance @ 45% on labour	Total	Remarks
	Grand Total							1,604.00	
47	Providing at site inclusive of all lead and lift of brand new approved make copper/alluminium conductor PVC insulated, sheathed steel/wire steel armoured UG cable with PVC outer sheathing 1.1 KV class UG cable (confirming to ISS 1554.)(including all lead and lift)	MESCOM -SR 2016-17							
47.1	2CX10SQMM Aluminiumn cable	MESCOM -SR 2016-17	Stock material SLNo.250 item No.36.02 and 11kv Labour portion S.No.262 item No.35.1	KM	54,334.00	12774.00	5748.3	72,856.30	
	Grand Total							72,856.30	
47.2	4CX10SQMM Aluminiumn cable	MESCOM -SR 2016-17	Stock material SLNo.251 item No.36.03 and 11kv Labour portion	KM	71,551.00	12774.00	5748.3	90,073.30	
	Grand Total							90,073.30	
47.3	2CX16SQMM Aluminiumn cable	MESCOM -SR 2016-17	Stock material SLNo.252 item No.36.04 and 11kv Labour portion	KM	56,956.00	12774.00	5748.3	75,478.30	
	Grand Total							75,478.30	
47.4	4CX16SQMM Aluminiumn cable	MESCOM -SR 2016-17	Stock material SLNo.253 item No.36.05 and 11kv Labour portion	KM	90,529.00	12774.00	5748.3	1,09,051.30	
	Grand Total							1,09,051.30	
47.5	4CX25SQMM Aluminiumn cable	MESCOM -SR 2016-17	Stock material SLNo.255 item No.36.07 and 11kv Labour portion S.No.262 item No.35.1	KM	1,09,778.00	12774.00	5748.3	1,28,300.30	
	Grand Total							1,28,300.30	
	Releasing and relaying the existing GI/PVC pipe for house service connection including all lead and lift as per MESCOM Norms including all lead and lift	MESCOM -SR 2016-17	11kv Labour portion S.No.245 item No.32.16	mtr					
48	Releasing is 90% of laying ie 45*90%					40.50			
	laying=45					45.00	20.475	422.00	
	Grand Total					85.50	38.475	123.98 123.98	
49	Supplying and laying of Class A GI pipe on pole /wall/drain crossing with nexessary clamoing arrangements for UG cable of 1.1KV class.							-	
49.1	40mm dia size	PWD-Ele SR 2014-15	Page No 62 item no7.12.1	Mtr	345.00			345.00	

RA No.	Description	SR	Ref	Unit	Basic	Labour/lead/ lift/dewateri ng/MISC etc.,	Locality Allowance @ 45% on labour	Total	Remarks
	Grand Total							345.00	
50	Digging of trench of 0.6m deep \times 0.5 m wide refilling the trench to the required ground level and consolidating etc., (including all lead and lift)		Page No 62 item no 7.9.1	Mtr	78.00			78.00	
	Grand Total							78.00	
51	Providing and filling sand in excavated trench to cover already laid UG cable to a depth of 150mm all around the Cable	PWD-Electrical SR 2014-15	Page No 62 No 7.10	Mtr	103.00			103.00	
	Grand Total							103.00	
	Shifting of poles with HT/LT lines: Shifting of electrical poles along with HT/LT cross arms to temperary location and reshifting to original position after completion of work including all lead and lift as per MESCOM /	MESCOM -SR 2016-17	11kv Materials and labour cost S.No.1,(b)	set					
	Dismantling of 9mtr RCC poles =1060*90%=1060*90% (90% of erection cost) x2 times	11kv Materials and labour cost	S.No.1,(b)			1908			
	Erection of 9Mtr RCC poles-2times(1060x2)	11kv Materials and labour cost	S.No.1,(b)			2120			
	Dismantlin of HT cross crom(90% of erection)x 2times-99*90%	11kv Materials and labour cost	S.No.X,(a)			178.2			
	erection cross arms x2 times=99*2	11kv Materials and labour cost	S.No.X,(a)			198			
52	Releasing of conductor(90% of stringing)=50*3=150mtr-(2608/1000*90%*150)*2	11kv Materials and labour cost	S.No.XVIII,(b)			704.16			
	stringing of Conductor=50*3=150 x2 times (2608/1000)50*3)	11kv Materials and labour cost	S.No.XVIII,(b)			782.4			
	Dismantling of guy sets(90% of erection) x2 times(374*90%*2)	11kv Materials and labour cost	S.No.XVIII,(b)			673.2			
	Erection of guy sets x2 times(374*2)	11kv Materials and labour cost	S.No.XVIII,(b)			748			
	Transpotation 2% on material cost-5941*2%	11kv Materials and labour cost	S.No.1(b)			118.82			
						7430.78	3343.851	10,774.63	
	Grand Total							10,774.63	
	Releasing and erection 8 mtr strut pole including calmps digging pit, concreting withh all accessories of 8mtr PSC poles	11kv Materials and labour cost	S.No.I(c)	set					
	Releasing 90% of erection-848*90%					763.20			
53	Erection					848.00			
						1611.20	725.04	2,336.24	

RA No.	Description	SR	Ref	Unit	Basic	Labour/lead/ lift/dewateri ng/MISC etc.,	Locality Allowance @ 45% on labour	Total	Remarks
	Grand Total							2,336.24	
	Realeasing and erection of 9 mtr RCC three pole structure complete set including all stanadrd accessories as per MESCOM norms /estimate including all lead and lift		SL.No.VII(1a)	set					
54	Releasing 90% of erection-4115*90%					3703.5			
	Erection					5548			
						9251.5	4163.175	13,414.68	
	Grand Total							13,414.68	

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MANGALURU SMART CITY

1.9 Rate Analysis of Underground Drainage Zone 3 Part 2

	Rate Analysis For RCC Inspection	n Chamber			
SI. No	Descriptions	Unit	SR Rate (Rs)	SR Ref.	Remarks
1	Earthwork excavation for foundation of buildings, culverts, water supply, sanitary lines and electrical conduits either in pits or in trenches in ordinary soil including dressing the bottom and sides of pits and trenches, stacking the excavated soil clear from edges of excavation with all lead and lift after breaking of clods complete as per specifications, as per direction of Engineer etc., complete by manual means-	Cum		PWD SR 16-17 Page 5 Item No 2.3	
	Basic Rate		189.00		
	A.W. 12%		22.68		
	Total	Cum	211.68		
2	Providing and laying in position plain cement concrete M15 grade with granite graded metal of 20 mm and down size and clean sieved river sand for foundation and levelling course, machine mixed, concrete laid, well compacted, including cost and conveyance of all materials, all leads and lifts, loading and unloading, labour, hire charges of machinery, T&P., curing and all other incidental items of work required for successful completion of the work and as directed by the Engineer -incharge of the work etc complete.	Cum		PWD SR 16-17 Page 12 Item No 4.6	
	Basic Rate		5441.00		
	A.W. 12%		652.92		
	Total	Cum	6093.92		
3	Providing and laying in position reinforced cement concrete of design mix M25 with OPC cement @ 340kgs, with 20mm and down size graded granite metal coarse aggregates @0.70 cum and fine aggregates @0.47cum, with super plasticisers @ 3 liters conforming to IS 9103-1999 reafirmed-2008 at machine mixed, concrete laid in layers not exceeding 15 cms thick, vibrated for all works in foundation for footings, pedestrals, retaining walls, returnwalls, walls (any thickness) including attached pilasters, columnspillars, posts, struts, buttresses, bed blocks, anchor blocks & plinths etc including cost of all materials, labour, HOM of machinery, curing, complete but excluding cost of reinforcement as per specifications.	Cum	6221.00	PWD SR 16-17 Page 13 Item No 4.10	
	Basic Rate		6221.00		
	A.W. 12%	-	746.52		
	Total	Cum	6967.52		
4	Providing and fabricating TMT Steel reinforcement bars of Fe-500 grade including straightening the bars, cutting, bending, hooking and placing in position, lapping and or welding wherever required, tying with binding wire, anchoring to the adjoining members wherever necessary as per approved design and drawings including cost and conveyance of all materials with all leads and lifts, loading and unloading, all labour, hire charges of machineries, T&P, etc. complete and all other incidental items of works required for successful completion of the work as per approved drawings, specifications and as directed by the Engineer-in-charge. (Laps, hooks, chairs and wastages will not be measured and will not be paid for separately)			PWD SR 16-17 Page No 17 SI No 4.46.2	ISSUE Rate
	Basi Rate		60607.00		
	A.W. 12%		7272.84		
	Total rate	MT	67879.84		
			3. 2. 2. 3.		i

SI. No	Descriptions	Unit	SR Rate (Rs)	SR Ref.	Remarks
5	Providing and removing, centering, shuttering, strutting, propping etc and removal of form work for foundations, bases of columns/raft, including cost of all materials, labour complete as per specifications	Sqm		PWD SR 16-17 Page No 15 SI no 4.28	
	Basic Rate		231.00		
	A.W. 12%		27.72		
	Total	Sqm	258.72		
6	Providing and removing centering, shuttering, strutting, propping etc., and removal of form work for vertical surfaces such as walls of any thickness, slabs, including cost of all materials, labour complete as per specifiation.	Sqm		PWD SR 16-17 Page No 15 SI No 4.31	
	Basic rate		293.00		
	A.W. 12%		35.16		
	Total	Sqm	328.16		
7	Refilling pipeline trenches and foundation with selected available earth from trench excavation and foundation including watering, consolidation in layers of 15 cms., thickness including disposing off the surplus earth with all lead and lift, Including environmental and social safe guards, including all taxes, as directed by the Engineer-in-Charge etc., complete.	Cum		KUWS&DB SR 2015- 16. P-15, I-2	
	Basic rate		59.00		
	A.W. 12%		7.08		
	Total Rate	Cum	66.08		
8	Supply and fixing SFRC manhole cover and frame (Heavy duty) confirming to IS:12592 with latest ammendments	Nos		KUWS&DB SR 2015- 16. P-93 and 94,	
	Basic rate		1775.00		
	Fixing charges 10%		177.50		
	Total Rate		1952.50		

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Name of the Work :- Mangaluru Smart City 1.10 Rate Analysis of Taking out existing CC interlocking paver blocks

Taking out existing CC interlocking paver blocks from footpath/ central verge, including removal of rubbish etc., disposal of unserviceable material to the dumping ground, for which payment shall be made separately and stacking of serviceable material within 50 metre lead as per direction of Engineer-in-Charge.(As per Data Rate)

	Details o					
Sr.No.	Description Unit Quantity Rate Amount					Reference
	Labour					
a	Beldar	Day	0.25	258.88	64.72	KSRB Pg No.LIV SI No.5 Zone 2
b	Coolie	Day	1.00	258.88	258.88	KSRB Pg No.LIV,SI No.6 Zone 2
С	Sundries	LS	2.70	1.73	4.67	CPWD Pg No 29,Code No 9999
d	Lead and Lift Charges					
	Up to 1 Km (Debris=1.30 kg/m3)	Cum	1.30	2.5	3.25	KPWD-16-17,SI No.17.4 Pg No 140
	Total				331.52	
d	Add 1% Water Charges				3.32	
	Total				334.84	
e	Add 10 % Contractor's profit and overheads				33.48	
	Cost of 10 sqm				368.32	
	Cost of 1 sqm				36.83	

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MANGALURU SMART CITY 1.11 Rate Analysis of Underground Drainage Zone 3 Part 2

	Rate analysis for Dewat	ering cha	arges						
S.No.	Description	Unit	Nos.	Length	Width	Depth	Quantity	Rate (Rs.)	Amount (Rs.)
1	Dewatering for Lowering of water table to creat dry conditions at least upto the bed of the excavation including the cost of material, labour T & P articles & machinery laying sewer line & Manholes as per approved drawings according. to the requirement of the construction of structure. The cost of this work shall be inclusive of disposal of water pumped out at a safe place away from the structure. The dewatering will work till the completion of the structure as per approved drawings ,with all horizontal leads and lifts etc., complete in all respects as per specification and as directed by engineer. During the execution of work enough precaution should be taken by the contractor to ensure that the clear water flows from the delivery pipe of pumps to avoid any settlement of soil during the process.								
	Rate analysis for Dewatering charges.								
	HOM of Pump 23 KW - KPWD,SI No.58,Code No 1079 Pg No.XXXXVIII	Day	1				1	800	800.00
	Generator 33 KVAHire charges -KPWD,SI No.93,Code No 1322 Pg No.XXXXIX	Hr	8				8	296	2368.00
	Add Operator charges	Nos	2				2	250	500.00
							Cost for C	One day	3668.00
	Add 15 % cost for idling period on sub-total								550.20
						Cost	for One day	8 hr	4218.20

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