

GENERAL ABSTRACT

Jal Jeevan Mission (JJM)-JJM-WSS to Kudayathoor panchayath in Idukki District.-Providing Distribution System and Providing FHTC to various zones- package II-General Civil Work

Sl No	Head Description	Amount
1	Cost of materials	39514762.89
2	Working charge for Distribution System	54560213.63
3	Providing FHTC to various Zones	35639474.56
4	Application fee and connections	1688750.00
5	Road Restoration Charges	30429704.10
6	Road Restoration Charges	5712465.60
7	Road Restoration Charges to be remitted to other agencies	16092025.00
8	Renovation of Existing Sump at Koovappilly	186513.70
	Total Estimation PAC	183823909.48
C	Extra Charges	
C.001	Provision for GST	
	183823909.48 18.00%	33088303.71
	Grand Total	216912213.19
	Round off	87786.81
	Rounded Total(Rs)	217000000.00
	Rupees Twenty One Crore Seventy Lakh	

Approved By
Sudheer TS
(PEN:G45721), Chief Engineer

DETAILED ESTIMATE

Jal Jeevan Mission (JJM)-JJM-WSS to Kudayathoor panchayath in Idukki District.-Providing Distribution System and Providing FHTC to various zones- package II-General Civil Work

SI No	Specification	No	Length	Width	Depth	Cf	Quantity
1	Cost of materials						
1.001	100.98.115						
	Supply of DI K9 Pipe Conforming to IS 8329/2000, 100mm Dia.						
	100 mm DI						
	Zone 3	1	20.000				20.000
	Zone 4	1	20.000				20.000
	Zone 5	1	4707.000				4707.000
	Zone 6	1	1696.000				1696.000
	Zone 7	1	33.000				33.000
	For future maintenance	1	6476.000			0.0200 00	129.520
	Add for rounding	1				5.4800 00	5.480
	Total						6611.000
							Total Quantity in metre 6611.000
1.002	100.98.116						
	Supply of DI K9 Pipe Conforming to IS 8329/2000, 150mm Dia.						
	Supply of DI K9 Pipe Conforming to IS 8329/2000, 150mm Dia.						
	Zone 1	1	3192.000				3192.000
	Zone 2	1	517.000				517.000
	Zone 7	1	20.000				20.000
	For future mace	1	3729.000			0.0200 00	74.580
	Add for rounding	1				2.4200 00	2.420
	Total						3806.000
							Total Quantity in metre 3806.000
1.003	100.98.117						
	Supply of DI K9 Pipe Conforming to IS 8329/2000, 200mm Dia.						
	Supply of DI K9 Pipe Conforming to IS 8329/2000, 200mm Dia						
	Zone 1	1	1191.000				1191.000
	For future mace,	1	1191.000			0.0200 00	23.820

SI No	Specification	No	Length	Width	Depth	Cf	Quantity	
	Add for rounding	1				0.6800 00	0.680	
	Total						1215.500	
	Total Quantity in metre							1215.500
1.004	100.98.138							
	Supply of HDPE Pipe PE 100 (IS 4984/1995), 8kg, 160mm Outer Dia.							
	Supply of PE Pipe, PE100, PN6, 160mm dia, conforming to IS 4984/1995.							
	Zone 7	1	203.000				203.000	
	Add for rounding	1	1.000				1.000	
	Total						204.000	
	Total Quantity in metre							204.000
1.005	100.98.155							
	Supply of HDPE Pipe PE 100 (IS 4984/1995), 10kg, 110mm Outer Dia.							
	Supply of PE Pipe, PE100, PN10, 110mm dia, conforming to IS 4984/1995.							
	Zone-2	1	1862.000				1862.000	
	Zone-7	1	1228.000				1228.000	
	Total						3090.000	
	Total Quantity in metre							3090.000
1.006	100.98.195							
	Supply of HDPE Pipe PE 100 (IS 4984/1995), 16kg, 110mm Outer Dia.							
	Supply of PE Pipe, PE100, PN16, 110mm dia, conforming to IS 4984/1995							
	Zone 7	1	3793.000				3793.000	
	Add for rounding	1				5.0000 00	5.000	
	Total						3798.000	
	Total Quantity in metre							3798.000
1.007	100.98.154							
	Supply of HDPE Pipe PE 100 (IS 4984/1995), 10kg, 90mm Outer Dia.							
	Supply of PE Pipe, PE100, PN10, 90mm dia, conforming to IS 4984/1995.							
	Zone 1	1	2298.000				2298.000	
	Zone 2	1	13000.00 0				13000.00 0	
	Zone 3	1	500.000				500.000	
	Zone 4	1	250.000				250.000	
	Zone 6	1	861.000				861.000	
	Zone 7	1	784.000				784.000	
	Add for rounding	1				1.0000 00	1.000	

SI No	Specification	No	Length	Width	Depth	Cf	Quantity
	Total						17694.00 0
							Total Quantity in metre 17694.00 0
1.008	100.98.134						
	Supply of HDPE Pipe PE 100 (IS 4984/1995), 8kg, 90mm Outer Dia.						
	Supply of PE Pipe, PE100, PN6, 90mm dia, conforming to IS 4984/1995.						
	Zone 3	1	441.000				441.000
	Zone 4	1	260.000				260.000
	Add for rounding	1	1.000				1.000
	Total						702.000
							Total Quantity in metre 702.000
1.009	100.98.194						
	Supply of HDPE Pipe PE 100 (IS 4984/1995), 16kg, 90mm Outer Dia.						
	Supply of PE Pipe, PE100, PN16, 90mm dia, conforming to IS 4984/1995						
	Zone 1	1	14655.00 0				14655.00 0
	Zone 4	1	250.000				250.000
	Zone 5	1	1240.000				1240.000
	Zone 6	1	768.000				768.000
	Zone 7	1	13190.00 0				13190.00 0
	Add for rounding	1	5.000				5.000
	Total						30108.00 0
							Total Quantity in metre 30108.00 0
1.010	OD6667/2022-2023						
	Supply of 100mm GI (M) pipes						
	100 mm GI Pipe						
	For culvert gap closing	1	110.000				110.000
	Total						110.000
							Total Quantity in metre 110.000
1.011	OD41086/2022-2023						
	Supply of 150mm GI (M) pipes						
	Supply 150 mm GI pipe						
	Supply 150 mm GI pipe	1	60.000				60.000

SI No	Specification	No	Length	Width	Depth	Cf	Quantity
	Total						60.000
							Total Quantity in metre 60.000
1.012	100.98.440						
	Supply of CI Air Valve, Conforming to IS 14848 - 2000, Single Orifice, Small Orifice Type S1, Size 25mm.						
	Supply of CI Air Valve, 25 mm Single orifice						
	Air valve	55					55.000
	Total						55.000
							Total Quantity in no 55.000
1.013	100.98.445						
	Supply of CI Air Valve, Conforming to IS 14848 - 2000, Double Orifice Type DS2, Size 40mm.						
	Supply of CI Air Valve, Double Orifice Size 40mm.						
	Air valve	15					15.000
	Total						15.000
							Total Quantity in no 15.000
1.014	100.98.457						
	Supply of CI Double Flanged Sluice Valve Conforming to IS 14846 - 2000, Sluice Valve with Cap PN 1.6, Size 80mm.						
	Supply of CI Double Flanged Sluice Valve Sluice Valve with Cap PN 1.6, Size 80mm						
	80mm Sluice valve	48					48.000
	Total						48.000
							Total Quantity in no 48.000
1.015	100.98.458						
	Supply of CI Double Flanged Sluice Valve Conforming to IS 14846 - 2000, Sluice Valve with Cap PN 1.6, Size 100mm.						
	Supply of CI Double Flanged Sluice Valve Conforming to IS 14846 - 2000, Sluice Valve with Cap PN 1.6, Size 100mm.						
		15					15.000
	Total						15.000
							Total Quantity in no 15.000
1.016	100.98.460						
	Supply of CI Double Flanged Sluice Valve Conforming to IS 14846 - 2000, Sluice Valve with Cap PN 1.6, Size 150mm.						
	Supply of CI Double Flanged Sluice Valve Conforming to IS 14846 - 2000, Sluice Valve with Cap PN 1.6, Size 150mm.						
	150mm sluice valve	5					5.000

SI No	Specification	No	Length	Width	Depth	Cf	Quantity
	Total						5.000
						Total Quantity in no	5.000
1.017	100.98.461						
	Supply of CI Double Flanged Sluice Valve Conforming to IS 14846 - 2000, Sluice Valve with Cap PN 1.6, Size 200mm.						
	Supply of CI Double Flanged Sluice Valve Conforming to IS 14846 - 2000, Sluice Valve with Cap PN 1.6, Size 200mm.						
		2					2.000
	Total						2.000
						Total Quantity in no	2.000
2	Working charge for Distribution System						
2.001	100.1.1						
	Excavating trenches of required width for pipes, cables, etc., including excavation for sockets, and dressing of sides, ramming of bottoms, depth up to 1.5m, including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20cm in depth, including consolidating each deposited layer by ramming, watering, etc., and disposing of surplus excavated soil as directed, within a lead of 50m, in all kinds of soil.						
	EW excavation in all kinds of soil-70%						
	200 mm DI K9	1	1191.000	0.800	1.200	0.7000 00	800.352
	150 mm DI K9	1	3729.000	0.700	1.150	0.7000 00	2101.292
	100mm DI K9	1	6476.000	0.600	1.050	0.7000 00	2855.916
	160 mm PE	1	203.000	0.700	1.150	0.7000 00	114.391
	110 mm PE	1	3090+37 93	0.600	1.050	0.7000 00	3035.403
	90 mm PE	1	701+176 93+3010 3	0.500	1.000	0.7000 00	16973.95 0
	Total						25881.30 4
						Total Quantity in cum	25881.30 4
2.002	100.1.5						
	Excavating trenches of required width for pipes, cables, etc., including excavation for sockets, and dressing of sides, ramming of bottoms, depth up to 1.5m, including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20cm in depth, including consolidating each deposited layer by ramming, watering, etc., and disposing of surplus excavated soil as directed, within a lead of 50 m, in Ordinary Rock.						

SI No	Specification	No	Length	Width	Depth	Cf	Quantity
	EW excavation in ordinary rock-20%						
	200 mm DI k9	1	1191.000	0.800	1.200	0.2000 00	228.672
	150 mm DI k9	1	3729.000	0.700	1.150	0.2000 00	600.369
	100mm DI K9	1	6476.000	0.600	1.050	0.2000 00	815.976
	160 mm PE	1	203.000	0.700	1.150	0.2000 00	32.683
	110 mm PE	1	3090+37 93	0.600	1.050	0.2000 00	867.258
	90 mm PE	1	701+176 93+3010 3	0.500	1.000	0.2000 00	4849.700
	Total						7394.658
	Total Quantity in cum						7394.658
2.003	100.2.7 Excavating trenches of required width for pipes, cables, etc., including excavation for sockets, and dressing of sides, ramming of bottoms, depth up to 1.5m, including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20cm in depth, including consolidating each deposited layer by ramming, watering, etc., and disposing of surplus excavated soil as directed, within a lead of 50m, in Medium Rock where Blasting is Prohibited.						
	EW excavation in Medium Rock-5%						
	200 mm DI k9	1	1191.000	0.800	1.200	0.0500 00	57.168
	150 mm DI k9	1	3729.000	0.700	1.150	0.0500 00	150.092
	100 mm DI k9	1	6476.000	0.600	1.050	0.0500 00	203.994
	160 mm PE	1	203.000	0.700	1.150	0.0500 00	8.171
	110 mm PE	1	3090+37 93	0.600	1.050	0.0500 00	216.815
	90 mm PE	1	701+176 93+3010 3	0.500	1.000	0.0500 00	1212.425
	Total						1848.665
	Total Quantity in cum						1848.665
2.004	100.4.1						

SI No	Specification	No	Length	Width	Depth	Cf	Quantity
	Excavating in hard rock for trenches by blasting for laying pipes and stacking useful materials for measurements and disposing unserviceable materials within the initial lead of 50m and lift up to 1.50m (depth from 0.0m to 1.50m) and providing protection by earth filled cement bags during blasting to avoid damages to nearby structures (200 Nos. of earth filled cement bags for 10m ³ of blasting)						
	EW excavation in hard rock-5%						
	200 mm DI K9	1	1191.000	0.800	1.200	0.0500 00	57.168
	150 mm DI K9	1	3729.000	0.700	1.150	0.0500 00	150.092
	100 mm DI K9	1	6476.000	0.600	1.050	0.0500 00	203.994
	160 mm PE	1	203.000	0.700	1.150	0.0500 00	8.171
	110 mm PE	1	3090+37 93	0.600	1.050	0.0500 00	216.815
	90 mm PE	1	701+176 93+3010 3	0.500	1.000	0.0500 00	1212.425
	Total						1848.665
	Total Quantity in cum						1848.665
2.005	50.2.25.1						
	Filling with contractor's own earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20 cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift up to 1.5 m as per direction of site Engineer-in-charge						
	Filling with contractor's own earth						
		1	1831.000				1831.000
	Total						1831.000
	Total Quantity in cum						1831.000
2.006	100.8.1						
	Fencing one side of trenches, 1.50m height with two rows of 10cm plastic caution tape in vertical casuarina pole (girth 15cm to 24cm) fixed at 2m intervals.						
	Fencing one side of trenches						
		1	20000.00 0				20000.00 0
	Total						20000.00 0
	Total Quantity in metre						20000.00 0
2.007	100.59.1						

SI No	Specification	No	Length	Width	Depth	Cf	Quantity
	Cutting the bituminous / concrete roads with cutting machine for a minimum depth of 200mm along the sides of proposed alignment of the pipe to be laid without causing any damage to other utilities, including the charges for hire and conveyance of tools and plant, cost of consumables and charges for lighting, watching, ribbon fencing, caution boards, traffic diversion, and as per the direction of departmental officers etc. complete, before carrying out the demolition of bituminous / concrete road by mechanical means and carrying out the excavation.						
	Cutting the bituminous/ concrete roads						
	road crossing	56	5.000				280.000
	road side	1	20000.00 0				20000.00 0
	Total						20280.00 0
	Total Quantity in metre						20280.00 0
2.008	15.59						
	Dismantling of flexible pavement (bituminous courses) by mechanical means and disposal of dismantled material up to a lead of 1 kilo metre, as per direction of Engineer-in-charge.						
	Dismantling of flexible pavement						
	road crossing	28	5.000	0.500	0.200		14.000
	road side	1	20000.00 0	0.500	0.200		2000.000
	Total						2014.000
	Total Quantity in cum						2014.000
2.009	100.10.1						
	Laying HDPE pipes (IS : 4984) on land portion including conveying within initial lead and aligning the pipes, electro-fusion welding using automatic or semi-automatic electrofusion machines, testing the pipeline thus fabricated to suit the hydraulic working pressure and after testing, aligning the pipeline, lowering the pipe in position into the trenches already made, testing the line to suitable pressure with potable water before back filling and levelling the trenches including all labour charge, hire for appliances etc., complete but excluding cost of pipe and fittings: 90mm Nominal Outer Diameter pipes.						
	Laying HDPE pipes-90 mm						
		1	701+176 93+3010 3				48497.00 0
	Total						48497.00 0
	Total Quantity in metre						48497.00 0
2.010	100.10.2						

SI No	Specification	No	Length	Width	Depth	Cf	Quantity
	Laying HDPE pipes (IS : 4984) on land portion including conveying within initial lead and aligning the pipes, electro-fusion welding using automatic or semi-automatic electrofusion machines, testing the pipeline thus fabricated to suit the hydraulic working pressure and after testing, aligning the pipeline, lowering the pipe in position into the trenches already made, testing the line to suitable pressure with potable water before back filling and levelling the trenches including all labour charge, hire for appliances etc., complete but excluding cost of pipe and fittings: 110mm Nominal Outer Diameter Pipes.						
	Laying HDPE pipes-110 mm						
		1	3090+37 93				6883.000
	Total						6883.000
	Total Quantity in metre						6883.000
2.011	100.10.5						
	Laying HDPE pipes (IS : 4984) on land portion including conveying within initial lead and aligning the pipes, electro-fusion welding using automatic or semi-automatic electrofusion machines, testing the pipeline thus fabricated to suit the hydraulic working pressure and after testing, aligning the pipeline, lowering the pipe in position into the trenches already made, testing the line to suitable pressure with potable water before back filling and levelling the trenches including all labour charge, hire for appliances etc., complete but excluding cost of pipe and fittings: 160mm Nominal Outside Diameter Pipes.						
	Laying HDPE pipes -160 mm						
		1	203.000				203.000
	Total						203.000
	Total Quantity in metre						203.000
2.012	18.12.8						
	Providing and fixing G.I. pipes complete with G.I fittings including trenching and refilling etc. External work 80 mm dia nominal bore						
	Providing and fixing 80 mm GI pipes						
		1	3270.000				3270.000
	Total						3270.000
	Total Quantity in metre						3270.000
2.013	100.12.9						
	Conveying and fixing G.I. pipes complete with G.I. fittings including trenching and refilling etc., but excluding cost of pipes and fittings for External work: 100mm diameter nominal bore.						
	Conveying and fixing GI pipes						
		1	110.000				110.000
	Total						110.000
	Total Quantity in metre						110.000
2.014	100.12.11						

SI No	Specification	No	Length	Width	Depth	Cf	Quantity
	Conveying and fixing G.I. pipes complete with G.I. fittings including trenching and refilling etc., but excluding cost of pipes and fittings for External work: 150mm diameter nominal bore.						
	conveying and fixing GI pipes						
	150mm GI	1	60.000				60.000
	Total						60.000
	Total Quantity in metre						60.000
2.015	100.14.1						
	Conveying and laying S&S Centrifugally Cast (Spun) / Ductile Iron Pipes conforming to IS: 8329 excluding cost of pipes and specials: 100mm diameter Ductile Iron Class K-9 Pipes.						
	Conveying and laying S &S Centrifugally Cast/Ductile Iron pipes-100 mm						
		1	6476.000				6476.000
	Total						6476.000
	Total Quantity in metre						6476.000
2.016	100.14.2						
	Conveying and laying S&S Centrifugally Cast (Spun) / Ductile Iron Pipes conforming to IS: 8329 excluding cost of pipes and specials: 150mm diameter Ductile Iron Class K-9 Pipes.						
	Conveying and laying S &S Centrifugally Cast/Ductile Iron pipes-150 mm						
		1	3729.000				3729.000
	Total						3729.000
	Total Quantity in metre						3729.000
2.017	100.14.3						
	Conveying and laying S&S Centrifugally Cast (Spun) / Ductile Iron Pipes conforming to IS: 8329 excluding cost of pipes and specials: 200mm diameter Ductile Iron Class K-9 Pipes.						
	Conveying and laying S &S Centrifugally Cast/Ductile Iron pipes-200 mm						
		1	1191.000				1191.000
	Total						1191.000
	Total Quantity in metre						1191.000
2.018	18.83.2						
	Labour for cutting C.I. pipe with steel saw.100 mm diameter C.I. pipe						
	Labour for cutting C.I pipe-100 mm						
		90					90.000
	Total						90.000
	Total Quantity in Each Cut						90.000
2.019	18.83.4						
	Labour for cutting C.I. pipe with steel saw.150 mm diameter C.I. pipe						

SI No	Specification	No	Length	Width	Depth	Cf	Quantity
	Labour for cutting C.I pipe-150 mm						
		52					52.000
	Total						52.000
	Total Quantity in Each Cut						52.000
2.020	18.83.5						
	Labour for cutting C.I. pipe with steel saw.200 mm diameter C.I. pipe						
	Labour for cutting C.I pipe-200 mm						
		40					40.000
	Total						40.000
	Total Quantity in Each Cut						40.000
2.021	18.67.1						
	Providing and laying S & S C.I. Standard specials suitable for mechanical jointing as per IS 13382:Upto 300 mm dia						
	Providing and laying S&S C.I						
	200 mm DI	4				0.2700 00	1.080
	150 mm DI	7				0.2000 00	1.400
	100 mm DI	13				0.1300 00	1.690
	Total						4.170
	Total Quantity in quintal						4.170
2.022	18.68.1						
	Providing and laying D.I specials of class K - 12 suitable for push - on jointing as per IS : 9523 :Upt 600 mm dia						
	Providing and laying D.I						
	200mm 90deg bend	2				0.3200 00	0.640
	200mm 45deg.bend	4				0.2600 00	1.040
	200mm22.5 deg bend	22				0.2300 00	5.060
	200mm11.25 deg bend	35				0.2100 00	7.350
	150mm 90deg bend	2				0.2000 00	0.400
	150mm 45deg.bend	4				0.1600 00	0.640
	150mm 22.5 deg bend	26				0.1500 00	3.900

SI No	Specification	No	Length	Width	Depth	Cf	Quantity
	150mm 11.25 deg bend	42				0.1400 00	5.880
	100mm 90 deg bend	6				0.1100 00	0.660
	100mm 45 deg bend	6				0.1000 00	0.600
	100mm 22.5 deg bend	44				0.0900 00	3.960
	100mm 11.25 deg bend	68				0.0900 00	6.120
	100x100 tee	6				0.1900 00	1.140
	100x80tee	6				0.1800 00	1.080
	150x150tee	3				0.3200 00	0.960
	150x80tee	3				0.2800 00	0.840
	200x200tee	2				0.4900 00	0.980
	200x80tee	2				0.4100 00	0.820
	100mm tail piece	24				0.1000 00	2.400
	150mm tail piece	12				0.1600 00	1.920
	200mm tail piece	8				0.2300 00	1.840
	Total						48.230
							Total Quantity in quintal 48.230
2.023	18.70.1						
	Providing push - on-joints to Centrifugally (Spun) Cast Iron Pipes or Ductile Iron Pipes including testing of joints and including the cost of rubber gasket:100 mm dia pipes						
	Providing push - on-joints						
	100mm dia.pipe	1080					1080.000
	Total						1080.000
							Total Quantity in joint 1080.000
2.024	18.70.2						
	Providing push - on-joints to Centrifugally (Spun) Cast Iron Pipes or Ductile Iron Pipes including testing of joints and including the cost of rubber gasket:150 mm dia pipes						
	Providing push - on-joints to Centrifugally						

SI No	Specification	No	Length	Width	Depth	Cf	Quantity
	150mm dia. pipe	622					622.000
	Total						622.000
	Total Quantity in joint						622.000
2.025	18.70.3						
	Providing push - on-joints to Centrifugally (Spun) Cast Iron Pipes or Ductile Iron Pipes including testing of joints and including the cost of rubber gasket:200 mm dia pipes						
	Providing push - on-joints						
	200mm dia. pipe	200					200.000
	Total						200.000
	Total Quantity in joint						200.000
2.026	18.30.2						
	Providing flanged joints to double flanged C.I./ D.I pipes and specials, including testing of joints:100 mm diameter pipe						
	Providing flanged joints						
	100mm dia. pipe	24					24.000
	Total						24.000
	Total Quantity in no						24.000
2.027	18.30.4						
	Providing flanged joints to double flanged C.I./ D.I pipes and specials, including testing of joints:150 mm diameter pipe						
	Providing flanged joints to double flanged C.I./ D.I pipes						
	150mm dia.pipe	12					12.000
	Total						12.000
	Total Quantity in no						12.000
2.028	18.30.5						
	Providing flanged joints to double flanged C.I./ D.I pipes and specials, including testing of joints:200 mm diameter pipe						
	Providing flanged joints to double flanged C.I./ D.I pipes						
	200 mm dia. pipe	8					8.000
	Total						8.000
	Total Quantity in no						8.000
2.029	100.32.1						
	Conveying and fixing C. I. Single Acting Air Valve of approved quality with bolts, nuts, rubber insertions etc., complete, but excluding the cost of air valve (tail pieces, if required, will be paid separately): 25mm Single Acting Air Valve.						
	Conveying and fixing C I Single acting Air Valve						
	25 mm air valve	55					55.000
	Total						55.000

SI No	Specification	No	Length	Width	Depth	Cf	Quantity
	Total Quantity in no						55.000
2.030	100.32.2						
	Conveying and fixing C. I. Single Acting Air Valve of approved quality with bolts, nuts, rubber insertions etc., complete, but excluding the cost of air valve (tail pieces, if required, will be paid separately): 40mm Single Acting Air Valve.						
	Conveying and fixing C I Single acting Air Valve						
	40mm air valve	15					15.000
	Total						15.000
	Total Quantity in no						15.000
2.031	100.31.1.1						
	Conveying and fixing C.I. sluice valves (with cap) by providing bolts, nuts, rubber insertions etc., complete, but excluding the cost of the valve (tail pieces, if required, will be paid separately): 80mm diameter, Class I.						
	Conveying and fixing C.I. sluice valves						
	80 mm CI sluice valve	48					48.000
	Total						48.000
	Total Quantity in no						48.000
2.032	100.31.1.2						
	Conveying and fixing C.I. sluice valves (with cap) by providing bolts, nuts, rubber insertions etc., complete, but excluding the cost of the valve (tail pieces, if required, will be paid separately): 100mm diameter, Class I.						
	Conveying and fixing C.I. sluice valves						
	100 mm CI sluice valve	15					15.000
	Total						15.000
	Total Quantity in no						15.000
2.033	100.31.1.4						
	Conveying and fixing C.I. sluice valves (with cap) by providing bolts, nuts, rubber insertions etc., complete, but excluding the cost of the valve (tail pieces, if required, will be paid separately): 150mm diameter, Class I.						
	Conveying and fixing C.I. sluice valves						
	150mm CI sluice valve	5					5.000
	Total						5.000
	Total Quantity in no						5.000
2.034	100.31.1.5						
	Conveying and fixing C.I. sluice valves (with cap) by providing bolts, nuts, rubber insertions etc., complete, but excluding the cost of the valve (tail pieces, if required, will be paid separately): 200mm diameter, Class I.						
	Conveying and fixing C.I. sluice valves						

SI No	Specification	No	Length	Width	Depth	Cf	Quantity
	200mm CI sluice valve	2					2.000
	Total						2.000
	Total Quantity in no						2.000
2.035	OD41513/2022-2023						
	Supply and fixing of stainless steel spring loaded pressure relief valve as per IS 9739(1981)						
	Pressure relief valve						
		30					30.000
	Total						30.000
	Total Quantity in no						30.000
2.036	100.35.1						
	Testing 100mm DI/CI pipeline with potable water to the required test pressure 100 mm dia						
	Testing 100mm DI/CI pipeline						
	Testing 100mm DI/CI pipeline	1	6476.000				6476.000
	Total						6476.000
	Total Quantity in metre						6476.000
2.037	100.35.2						
	Testing 150mm DI/CI pipeline with potable water to the required test pressure 150 mm dia						
	Observed Data derived from item no.1018 of PHED DATA						
	Testing 150mm DI/CI pipeline						
	Testing 150mm DI/CI pipeline	1	3729.000				3729.000
	Total						3729.000
	Total Quantity in metre						3729.000
2.038	100.35.3						
	Testing 200mm DI/CI pipeline with potable water to the required test pressure 200 mm dia						
	Observed Data derived from item no.1020 of PHED DATA						
	Testing 200mm DI/CI pipeline						
	Testing 200mm DI/CI pipeline	1	1191.000				1191.000
	Total						1191.000
	Total Quantity in metre						1191.000
2.039	100.37.5.1						

SI No	Specification	No	Length	Width	Depth	Cf	Quantity
	In situ fabrication of M.S. pipes of size 100mm (I.D.) using 8mm thick M.S. plate including cost and conveyance charges of M.S. plate, all fabrication charges, charges of painting the steel work with two or more coat deluxe multi surface paint to give an even shade over an under-coat of primer etc., complete.						
	Fabricating M.S pipe of 100mm Dia						
	MS pipe	1	150.000				150.000
	Total						150.000
	Total Quantity in metre						150.000
2.040	100.37.5.2						
	Fabricating M.S. flanges of diameter 100mm using 12mm thick M.S. plate including cost and conveyance charges of M.S. plate, all fabrication charges, charges of painting the steel work with two or more coat deluxe multi surface paint to give an even shade over an under-coat of primer etc., complete: For pipes fabricated with 8mm thick M.S. plates.						
	Fabricating MS flanges						
	MS flange	6					6.000
	Total						6.000
	Total Quantity in no						6.000
2.041	100.37.5.3						
	Cutting 100mm (I.D.) M.S. pipes for making bends and other specials by gas cutting including cost of gas, all labour and hire charges of tools etc., complete: For pipes fabricated with 8mm thick M.S. plates.						
	cutting M.S pipe						
	Cutting	15					15.000
	Total						15.000
	Total Quantity in no						15.000
2.042	100.37.5.4						
	Welding 100mm (I.D.) M.S. pipes for making bends and other specials by gas/electric welding machine including cost of gas and welding rods, all labour and hire charges of tools etc., complete: For pipes fabricated with 8mm thick M.S. plates.						
	Welding						
	Welding	15					15.000
	Total						15.000
	Total Quantity in no						15.000
2.043	100.37.5.5						
	Grinding cut and weld edges of 100mm (I.D.) M.S. pipes during fabrication work including all labour and hire charges of tools etc., complete: For pipes fabricated with 8mm thick M.S. plates.						
	Grinding						
	Grinding	15					15.000
	Total						15.000

SI No	Specification	No	Length	Width	Depth	Cf	Quantity
	Total Quantity in no						15.000
2.044	100.37.6.1						
	In situ fabrication of M.S. pipes of size 150mm (I.D.) using 8mm thick M.S. plate including cost and conveyance charges of M.S. plate, all fabrication charges, charges of painting the steel work with two or more coat deluxe multi surface paint to give an even shade over an under-coat of primer etc., complete.						
	Fabricating M.S pipe of 150mm Dia						
	MS Fabrication	1	100.000				100.000
	Total						100.000
	Total Quantity in metre						100.000
2.045	100.37.6.2						
	Fabricating M.S. flanges of diameter 150mm using 12mm thick M.S. plate including cost and conveyance charges of M.S. plate, all fabrication charges, charges of painting the steel work with two or more coat deluxe multi surface paint to give an even shade over an under-coat of primer etc., complete: For pipes fabricated with 8mm thick M.S. plates.						
	Fabricating M.S flanges 150mm dia						
	MS flange	5					5.000
	Total						5.000
	Total Quantity in no						5.000
2.046	100.37.6.3						
	Cutting 150mm (I.D.) M.S. pipes for making bends and other specials by gas cutting including cost of gas, all labour and hire charges of tools etc., complete: For pipes fabricated with 8mm thick M.S. plates.						
	Cutting MS pipe						
	Cutting	10					10.000
	Total						10.000
	Total Quantity in no						10.000
2.047	100.37.6.4						
	Welding 150mm (I.D.) M.S. pipes for making bends and other specials by gas/electric welding machine including cost of gas and welding rods, all labour and hire charges of tools etc., complete: For pipes fabricated with 8mm thick M.S. plates.						
	Welding MS pipe						
	Welding	10					10.000
	Total						10.000
	Total Quantity in no						10.000
2.048	100.37.6.5						
	Grinding cut and weld edges of 150mm (I.D.) M.S. pipes during fabrication work including all labour and hire charges of tools etc., complete: For pipes fabricated with 8mm thick M.S. plates.						

SI No	Specification	No	Length	Width	Depth	Cf	Quantity
	Grinding MS pipe						
	Grinding	10					10.000
	Total						10.000
	Total Quantity in no						10.000
2.049	100.37.7.1						
	In situ fabrication of M.S. pipes of size 200mm (I.D.) using 8mm thick M.S. plate including cost and conveyance charges of M.S. plate, all fabrication charges, charges of painting the steel work with two or more coat deluxe multi surface paint to give an even shade over an under-coat of primer etc., complete.						
	Fabricating M.S pipe of 200mm Dia						
	MS Fabrication	1	60.000				60.000
	Total						60.000
	Total Quantity in metre						60.000
2.050	100.37.7.2						
	Fabricating M.S. flanges of diameter 200mm using 12mm thick M.S. plate including cost and conveyance charges of M.S. plate, all fabrication charges, charges of painting the steel work with two or more coat deluxe multi surface paint to give an even shade over an under-coat of primer etc., complete: For pipes fabricated with 8mm thick M.S. plates.						
	Fabricating M.S Flanges of 200mm Dia						
	MS flange	3					3.000
	Total						3.000
	Total Quantity in no						3.000
2.051	100.37.7.3						
	Cutting 200mm (I.D.) M.S. pipes for making bends and other specials by gas cutting including cost of gas, all labour and hire charges of tools etc., complete: For pipes fabricated with 8mm thick M.S. plates.						
	Cutting M.S pipe						
	Cutting	8					8.000
	Total						8.000
	Total Quantity in no						8.000
2.052	100.37.7.4						
	Welding 200mm (I.D.) M.S. pipes for making bends and other specials by gas/electric welding machine including cost of gas and welding rods, all labour and hire charges of tools etc., complete: For pipes fabricated with 8mm thick M.S. plates.						
	Welding MS pipe						
	Welding	8					8.000
	Total						8.000
	Total Quantity in no						8.000
2.053	100.37.7.5						

SI No	Specification	No	Length	Width	Depth	Cf	Quantity
	Grinding cut and weld edges of 200mm (I.D.) M.S. pipes during fabrication work including all labour and hire charges of tools etc., complete: For pipes fabricated with 8mm thick M.S. plates.						
	Grinding MS pipe						
	Grinding	8					8.000
	Total						8.000
	Total Quantity in no						8.000
2.054	2.8.1						
	Earth work in excavation by mechanical means (Hydraulic excavator) /manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan), including dressing of sides and ramming of bottoms, lift up to 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m.All kinds of soil						
	Earth work in excavation by mechanical means						
	valve chamber of size 1*1*1.5 m	35	1.500	1.500	1.500		118.125
	Total						118.125
	Total Quantity in cum						118.125
2.055	4.1.3						
	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level:1:2:4 (cement : 2 coarse sand (zone-III) : 4 graded stone aggregate 20 mm nominal size)						
	Providing and laying in position cement concrete						
	valve chamber of size 1*1*1.5 m	35	1.500	1.500	0.100		7.875
	for anchor block	650	0.600	0.600	0.600		140.400
	For concreting road	1	2000.000	1.000	0.200		400.000
	Total						548.275
	Total Quantity in cum						548.275
2.056	5.1.2						
	Providing and laying in position specified grade of reinforced cement concrete, excluding the cost of centering, shuttering, finishing and reinforcement - All work up to plinth level:1:1:5:3 (1 cement 1.5 coarse sand :3 graded stone aggregate 20 mm nominal size)						
	Providing and laying in position specified grade of reinforced cement concrete						
	valve chamber base	35	1.300	1.300	0.150		8.873
	valve chamber - side wall	35	4*1.15	1.200	0.150		28.980
	valve chamber - cover slab	35	1.300	1.300	0.200		11.830

SI No	Specification	No	Length	Width	Depth	Cf	Quantity
	Total						49.683
						Total Quantity in cum	49.683
2.057	5.9.2						
	Centering and shuttering including strutting, etc. and removal of form for: Walls (any thickness) including attached pilasters, buttersesses, plinth and string courses etc.						
	Centering and shuttering including strutting						
	valve chamber - side wall inside	35	4.000		1.200		168.000
	valve chamber - side wall out side	35	5.200		1.200		218.400
	cover slab	35	1.300	1.300			59.150
	cover slab- sides	35	5.200		0.200		36.400
	For anchor block	650	.6*4		0.600		936.000
	Total						1417.950
						Total Quantity in sqm	1417.950
2.058	5.22.6						
	Steel reinforcement for R.C.C work including straightening, cutting, bending, placing in position and binding all complete upto plinth level Thermo - Mechanically Treated bars of grade Fe-500D or more						
	Steel reinforcement for R.C.C work						
	For valve chamber	1	50*65			1.0000 00	3250.000
	Total						3250.000
						Total Quantity in kilogram	3250.000
3	Providing FHTC to various Zones						
3.001	100.60.13.1.2						
	Providing 15mm (1/2 inch) house connection with 15mm water meter from existing PVC / HDPE mains up to 110 mm dia., up to a length of 5m using 20mm (1/2 inch) PE Pipe, PE80, PN16, Conforming to IS 4984: 2016 or later edition and PP PN 16 Compression / GM / Brass specials viz. brass ferrule, brass hexagonal nipple, GM full way wheel valve, bend, MTA, FTA, couplers, PVC Service Saddle of suitable size etc. and connecting with the mains, testing the joints etc. complete including trenching and refilling in all kinds of soil up to a depth of 1.50m for main line tracing and trench of average cross section 0.3m x 0.75m for laying connection pipe and service pipe, fixing water meter, lighting, watching, providing caution boards, traffic control etc. complete including cost of materials, hire for tools, cost of consumables and labour charges, including the cost of tested Class B Multijet water meter with ISI mark and weather resistant PP / PE meter box of minimum size 300mm x 200mm x 150mm, but excluding charges for cutting the concrete / tarred / bituminous roads etc, and as per the direction of the departmental officers.						
	Providing 15mm (1/2 inch) house connection with 15mm water meter from existing PVC / HDPE						

SI No	Specification	No	Length	Width	Depth	Cf	Quantity
	Providing 15mm (1/2 inch) house connection	1260					1260.000
	Total						1260.000
	Total Quantity in no						1260.000
3.002	100.60.13.3.2						
	Providing 20mm (3/4 inch) house connection with 15mm water meter from existing PVC / HDPE mains up to 110 mm dia., up to a length of 5m using 25mm (3/4 inch) PE Pipe, PE80, PN16, Conforming to IS 4984: 2016 or later edition and PP PN 16 Compression / GM / Brass specials viz. brass ferrule, brass hexagonal nipple, GM full way wheel valve, bend, MTA, FTA, couplers, PVC Service Saddle of suitable size etc. and connecting with the mains, testing the joints etc. complete including trenching and refilling in all kinds of soil up to a depth of 1.50m for main line tracing and trench of average cross section 0.3m x 0.75m for laying connection pipe and service pipe, fixing water meter, lighting, watching, providing caution boards, traffic control etc. complete including cost of materials, hire for tools, cost of consumables and labour charges, including the cost of tested Class B Multijet water meter and weather with ISI mark resistant PP / PE meter box of minimum size 300mm x 200mm x 150mm, but excluding charges for cutting the concrete / tarred / bituminous roads etc, and as per the direction of the departmental officers.						
	Providing 20mm (3/4 inch) house connection with 15mm water meter from existing PVC / HDPE						
	Providing 20mm (3/4 inch) house connection	560					560.000
	Total						560.000
	Total Quantity in no						560.000
3.003	100.60.13.7.2						
	Providing 15mm (1/2 inch) house connection with 15mm water meter from existing CI mains up to 125 mm dia., up to a length of 5 m using 20mm (1/2 inch) PE Pipe, PE80, PN16, Conforming to IS 4984: 2016 or later edition and PP PN 16 Compression / GM / Brass specials viz. brass ferrule, brass hexagonal nipple, GM full way wheel valve, bend, MTA, FTA, couplers etc. and connecting with the mains, testing the joints etc. complete including trenching and refilling in all kinds of soil up to a depth of 1.50m for main line tracing and trench of average cross section 0.3m x 0.75m for laying connection pipe and service pipe, fixing water meter, lighting, watching, providing caution boards, traffic control etc. complete including cost of materials, hire for tools, cost of consumables and labour charges, including the cost of tested Class B Multijet water meter with ISI mark and weather resistant PP / PE meter box of minimum size 300mm x 200mm x 150mm, but excluding charges for cutting the concrete / tarred / bituminous roads etc, and as per the direction of the departmental officers						
	Providing 15mm (1/2 inch) house connection with 15mm water meter from existing CI mains						
	Providing 15mm (1/2 inch) house connection	140					140.000

SI No	Specification	No	Length	Width	Depth	Cf	Quantity
	Total						140.000
						Total Quantity in no	140.000
3.004	100.60.13.9.2						
	Providing 20mm (3/4 inch) house connection with 15mm water meter from existing CI mains up to 125 mm dia., up to a length of 5 m using 25mm (3/4 inch) PE Pipe, PE80, PN16, Conforming to IS 4984: 2016 or later edition and PP PN 16 Compression / GM / Brass specials viz. brass ferrule, brass hexagonal nipple, GM full way wheel valve, bend, MTA, FTA, couplers etc. and connecting with the mains, testing the joints etc. complete including trenching and refilling in all kinds of soil up to a depth of 1.50m for main line tracing and trench of average cross section 0.3m x 0.75m for laying connection pipe and service pipe, fixing water meter, lighting, watching, providing caution boards, traffic control etc. complete including cost of materials, hire for tools, cost of consumables and labour charges, including the cost of tested Class B Multijet water meter with ISI mark and weather resistant PP / PE meter box of minimum size 300mm x 200mm x 150mm, but excluding charges for cutting the concrete / tarred / bituminous roads etc, and as per the direction of the departmental officers						
	Providing 20mm (3/4 inch) house connection with 15mm water meter from existing CI mains						
	Providing 20mm (3/4 inch) house connection	75					75.000
	Total						75.000
						Total Quantity in no	75.000
3.005	100.60.14.7.2						
	Providing 15mm (1/2 inch) house connection with 15mm water meter from existing CI mains from 150mm to 200mm dia., up to a length of 5 m using 20mm (1/2 inch) PE Pipe, PE80, PN16, Conforming to IS 4984: 2016 or later edition and PP PN 16 Compression / GM / Brass specials viz. brass ferrule, brass hexagonal nipple, GM full way wheel valve, bend, MTA, FTA, couplers etc. and connecting with the mains, testing the joints etc. complete including trenching and refilling in all kinds of soil up to a depth of 1.50m for main line tracing and trench of average cross section 0.3m x 0.75m for laying connection pipe and service pipe, fixing water meter, lighting, watching, providing caution boards, traffic control etc. complete including cost of materials, hire for tools, cost of consumables and labour charges, including the cost of tested Class B Multijet water meter with ISI mark and weather resistant PP / PE meter box of minimum size 300mm x 200mm x 150mm, but excluding charges for cutting the concrete / tarred / bituminous roads etc, and as per the direction of the departmental officers.						
	Providing 15mm (1/2 inch) house connection with 15mm water meter from existing CI mains						
	Providing 15mm (1/2 inch) house connection	150					150.000
	Total						150.000
						Total Quantity in no	150.000

SI No	Specification	No	Length	Width	Depth	Cf	Quantity
3.006	100.60.14.9.2						
	Providing 20mm (3/4 inch) house connection with 15mm water meter from existing CI mains from 150mm to 200mm dia., up to a length of 5 m using 25mm (3/4 inch) PE Pipe, PE80, PN16, Conforming to IS 4984: 2016 or later edition and PP PN 16 Compression / GM / Brass specials viz. brass ferrule, brass hexagonal nipple, GM full way wheel valve, bend, MTA, FTA, couplers etc. and connecting with the mains, testing the joints etc. complete including trenching and refilling in all kinds of soil up to a depth of 1.50m for main line tracing and trench of average cross section 0.3m x 0.75m for laying connection pipe and service pipe, fixing water meter, lighting, watching, providing caution boards, traffic control etc. complete including cost of materials, hire for tools, cost of consumables and labour charges, including the cost of tested Class B Multijet water meter with ISI mark and weather resistant PP / PE meter box of minimum size 300mm x 200mm x 150mm, but excluding charges for cutting the concrete / tarred / bituminous roads etc, and as per the direction of the departmental officers.						
	Providing 20mm (3/4 inch) house connection with 15mm water meter from existing CI mains						
	Providing 20mm (3/4 inch) house connection	65					65.000
	Total						65.000
	Total Quantity in no						65.000
3.007	100.60.21.1.1						
	Providing 15mm (1/2 inch) GM Air Valve in the water meter assembly for 15mm water connection, using 20mm (1/2 inch) PE Pipe, PE80, PN16, Conforming to IS 4984: 2016 or later edition and PP PN 16 Compression specials including cost of materials, consumables, hire for tools and labour charges etc. complete and as per the directions of the department officers.						
	Providing 15mm (1/2 inch) GM Air Valve						
	Providing 15mm (1/2 inch) GM Air Valve	1550					1550.000
	Total						1550.000
	Total Quantity in no						1550.000
3.008	100.60.21.2.1						
	Providing 20mm (3/4 inch) GM Air Valve in the water meter assembly for 20mm water connection, using 25mm (3/4 inch) PE Pipe, PE80, PN16, Conforming to IS 4984: 2016 or later edition and PP PN 16 Compression specials including cost of materials, consumables, hire for tools and labour charges etc. complete and as per the directions of the department officers.						
	Providing 20mm (3/4 inch) GM Air Valve						
	Providing 20mm (3/4 inch) GM Air Valve	700					700.000
	Total						700.000

SI No	Specification	No	Length	Width	Depth	Cf	Quantity
Total Quantity in no							700.000
3.009	100.60.23.3.1	Providing 15mm PVC Tap in the water meter assembly for 15mm (1/2 inch) water connection, using 20mm (1/2 inch) Indian Standard uPVC Class 6 pipes, uPVC specials and PP PN 16 Compression specials including cost of materials, consumables, hire charges for tools and labour charges etc. complete and as per the direction of departmental officers.					
	Providing 15mm PVC tap						
	Providing 15mm PVC tap	1550					1550.000
	Total						1550.000
Total Quantity in no							1550.000
3.010	100.60.23.4.1	Providing 15mm PVC Tap in the water meter assembly for 20mm (3/4 inch) water connection, using 25mm (3/4 inch) Indian Standard Class 6 uPVC pipes, uPVC specials and PP PN 16 Compression specials including cost of materials, consumables, hire charges for tools and labour charges etc. complete and as per the direction of departmental officers.					
	Providing 15mm PVC tap						
	Providing 15mm PVC tap	700					700.000
	Total						700.000
Total Quantity in no							700.000
3.011	100.60.15.1.1	Providing additional length of house connection pipe using 20 mm (1/2 inch) PE Pipe, PE80, PN16, Conforming to IS 4984: 2016 or later edition and PN16 specials and testing the joints etc., by trenching and refilling in all kinds of soil with trench of average cross section 0.3m x 0.75m for laying of connection pipe and service pipe, lighting, watching, providing caution boards, traffic control etc., including cost of materials, hire for tools, cost of consumables and labour charges etc. complete, but excluding the cost of cutting of concrete / tarred / bituminous roads etc., and as per the directions of the department officers.					
	Providing additional length of house connection pipe using 20 mm						
	Providing additional length of house connection pipe using 20 mm	1550	18.000				27900.00 0
	Total						27900.00 0
Total Quantity in metre							27900.00 0
3.012	100.60.15.2.1						

SI No	Specification	No	Length	Width	Depth	Cf	Quantity
	Providing additional length of house connection pipe using 25 mm (3/4 inch) PE Pipe, PE80, PN16, Conforming to IS 4984: 2016 or later edition and PN 16 specials and testing the joints etc., by trenching and refilling in all kinds of soil with trench of average cross section 0.3m x 0.75m for laying of connection pipe and service pipe, lighting, watching, providing caution boards, traffic control etc., including cost of materials, hire for tools, cost of consumables and labour charges etc. complete, but excluding the cost of cutting of concrete / tarred / bituminous roads etc., and as per the directions of the department officers.						
	Providing additional length of house connection pipe using 25 mm						
	Providing additional length of house connection pipe using 25 mm	700	40.000				28000.00 0
	Total						28000.00 0
	Total Quantity in metre						28000.00 0
3.013	100.59.1						
	Cutting the bituminous / concrete roads with cutting machine for a minimum depth of 200mm along the sides of proposed alignment of the pipe to be laid without causing any damage to other utilities, including the charges for hire and conveyance of tools and plant, cost of consumables and charges for lighting, watching, ribbon fencing, caution boards, traffic diversion, and as per the direction of departmental officers etc. complete, before carrying out the demolition of bituminous / concrete road by mechanical means and carrying out the excavation.						
	Cutting the bituminous / concrete roads with cutting machine						
	Crossing	160	4.000				640.000
	road edge	120	10.000				1200.000
	Total						1840.000
	Total Quantity in metre						1840.000
3.014	15.59						
	Dismantling of flexible pavement (bituminous courses) by mechanical means and disposal of dismantled material up to a lead of 1 kilo metre, as per direction of Engineer-in-charge.						
	Dismantling of flexible pavement (bituminous courses) by mechanical means						
	road crossing	80	4.000	0.300	0.200		19.200
	road edge	120	10.000	0.300	0.200		72.000
	Total						91.200
	Total Quantity in cum						91.200
3.015	100.60.8.1						

SI No	Specification	No	Length	Width	Depth	Cf	Quantity
	Replacing the choked / damaged 15mm (1/2 inch) house connection with 15mm (1/2 inch) water meter from existing mains, up to a length of 5m using 20mm Indian Standard Class 6 uPVC pipe and uPVC / Brass specials viz. brass ferrule, Elbow, MTA, FTA, couplers etc. and connecting with the mains, testing the joints etc. complete including trenching and refilling in all kinds of soil up to a depth of 1.50m for main line tracing and trench of average cross section 0.3m x 0.75m for laying connection pipe and service pipe, safely removing & re-fixing existing water meter, lighting, watching, providing caution boards, traffic control etc. complete including cost of materials, hire for tools, cost of consumables and labour charges but excluding cost of water meter and meter box and excluding charges for cutting the concrete / tarred / bituminous roads and as per the directions of the department officers						
	Replacing the choked / damaged 15mm (1/2 inch) house connection with 15mm (1/2 inch) water meter						
	Replacing the choked / damaged 15mm (1/2 inch) house connection	450					450.000
	Total						450.000
	Total Quantity in no						450.000
3.016	100.60.8.2						
	Replacing the choked / damaged 20mm (3/4 inch) house connection with 20mm (3/4 inch) water meter from existing mains, up to a length of 5m using 25mm Indian Standard Class 6 uPVC pipe and uPVC / Brass specials viz. brass ferrule, Elbow, MTA, FTA, couplers etc. and connecting with the mains, testing the joints etc. complete including trenching and refilling in all kinds of soil up to a depth of 1.50m for main line tracing and trench of average cross section 0.3m x 0.75m for laying connection pipe and service pipe, safely removing & re-fixing existing water meter, lighting, watching, providing caution boards, traffic control etc. complete including cost of materials, hire for tools, cost of consumables and labour charges but excluding cost of water meter and meter box and excluding charges for cutting the concrete / tarred / bituminous roads and as per the directions of the department officers.						
	Replacing the choked / damaged 20mm (3/4 inch) house connection						
	Replacing the choked / damaged 20mm (3/4 inch) house connection	313					313.000
	Total						313.000
	Total Quantity in no						313.000
3.017	4.1.3						
	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level:1:2:4 (cement : 2 coarse sand (zone-III) : 4 graded stone aggregate 20 mm nominal size)						
	cement concrete 1:2:4						
	for road concrete	120	10.000	0.300	0.150		54.000

SI No	Specification	No	Length	Width	Depth	Cf	Quantity	
	for road concrete	80	4.000	0.300	0.150		14.400	
	Total						68.400	
	Total Quantity in cum							68.400
4	Application fee and connections							
4.001	OD7064/2022-2023							
	Charges for application fee, connection fee, meter testing fee etc for connections having length below 30 m;							
	Charges for application fee length below 30m.							
	length below 30m.	1550					1550.000	
	Total						1550.000	
	Total Quantity in no							1550.000
4.002	OD7065/2022-2023							
	Charges for application fee, connection fee, meter testing fee etc for connections having length above 30 m;							
	Charges for application fee length above 30m.							
	length above 30m.	700					700.000	
	Total						700.000	
	Total Quantity in no							700.000
4.003	OD42319/2022-2023							
	Geo Tagging to the new Service connections							
	Geo tagging to the new service connections							
	Geo tagging to the new service connections	2250					2250.000	
	Total						2250.000	
	Total Quantity in no							2250.000
5	Road Restoration Charges							
5.001	3.6							
	Excavation for roadwork in soil with hydraulic excavator of 0.9 cum bucket capacity including cutting and loading in tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and transporting to the embankment location within all lifts and lead upto 1000m							
	EW for road work							
	Tar surface	1	14000.00 0	1.100	0.400		6160.000	
	Total						6160.000	
	Total Quantity in cum							6160.000
5.002	4.1.B.2							

SI No	Specification	No	Length	Width	Depth	Cf	Quantity
	Construction of granular sub-base by providing graded material, spreading in uniform layers with a motor grader on a prepared surface, mixing by mix in-place method with rotavator at OMC, and compacting with a vibratory roller to achieve the desired density, complete as per clause 401. Grading-VI - For sub-base cum drainage layer - Mix in Place Method						
	Granular sub base						
	Tar surface	1	14000.00 0	1.000	0.200		2800.000
	Total						2800.000
	Total Quantity in cum						2800.000
5.003	4.12						
	Providing, laying, spreading and compacting graded stone aggregate to Wet Mix Macadam specification including premixing the Material with water at OMC in mechanical mix plant carriage of mixed Material by tipper to site, laying in uniform layers with paver in sub- base / base course on well prepared surface and compacting with vibratory roller to achieve the desired density.						
	WMM						
	Tar surface	1	14000.00 0	1.000	0.200		2800.000
	Total						2800.000
	Total Quantity in cum						2800.000
5.004	5.1.a						
	Providing and applying primer coat with bitumen emulsion (SS) on prepared surface of granular Base including clearing of road surface and spraying primer at the rate of 0.70 - 1.0 kg/sqm using mechanical means.						
	Priming coat						
	Tar surface	1	14000.00 0	1.100			15400.00 0
	Total						15400.00 0
	Total Quantity in sqm						15400.00 0
5.005	OD42503/2022-2023						
	Mix seal surfacing Providing, laying and rolling of close-graded premix surfacing material of 20mm thickness composed of 11.2mm to 0.9mm Type-A aggregate using penetration grade bitumen to required line, grade and level to serve as wearing course on previously prepared base, including mixing in a suitable plant, laying and rolling with a three wheel 8-10 KN static roller and finishing to required level and grades as per Technical specification cluse 509 of MORD(Usage of bitumen is 22.00Kg/(10m ²)By Manual Means						
	Mix seal surfacing						
	Road restoration	1	12000.00 0		1.100		13200.00 0

SI No	Specification	No	Length	Width	Depth	Cf	Quantity
	Total						13200.00 0
						Total Quantity in sqm	13200.00 0
5.006	5.3.2.a						
	Providing and laying bituminous macadam with 80-100 TPH hot mix plant producing an average output of 75 tonnes per hour using crushed aggregates of specified grading premixed with a bituminous binder (VG 30), transported to the site, laid over a previously prepared surface with paver finisher to the required grade, level, and alignment and rolled as per clauses 501.6 and 501.7 to achieve the desired compaction For Grading II - (19 mm nominal size)						
	Providing BM						
	For BM	1	2000.000	1.100	0.050		110.000
	Total						110.000
						Total Quantity in cum	110.000
5.007	5.6.1.a						
	Providing and laying bituminous concrete with 80-100 TPH hot mix plant producing an average output of 75 tonnes per hour using crushed aggregates of specified grading, premixed with a bituminous binder(NRMB) @ 5.2 percent of mix and filler, transporting the hot mix to work site, laying with a hydrostatic paver finisher with sensor control to the required grade, level, and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MORTH specification clause No. 507 complete in all respects For Grading - I (19 mm nominal size)						
	Providing BC						
	For BC	1	2000.000	1.300	0.030		78.000
	Total						78.000
						Total Quantity in cum	78.000
5.008	5.2.a						
	Providing and applying tack coat with bitumen emulsion(RS) using emulsion pressure distributor at the rate of 0.20 - 0.30 kg per sqm on the prepared bituminous surface cleaned with mechanical broom.						
	Providing and applying tack coat						
	For BM	1	2000.000	1.000			2000.000
	For BC	1	2000.000	1.300			2600.000
	Total						4600.000
						Total Quantity in sqm	4600.000
5.009	OD41643/2022-2023						
	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.						

SI No	Specification	No	Length	Width	Depth	Cf	Quantity
	Taking out CC paver block						
	CC paver block	1	1000.000	1.200			1200.000
	Total						1200.000
	Total Quantity in sqm						1200.000
5.010	OD41644/2022-2023						
	Laying old cement concrete interlocking paver blocks of any design/ shape laid in required line, level, curvature, colour and pattern over and including 50 mm thick compacted bed of coarse sand, filling the joints with fine sand etc. all complete as per the direction of Engineer-in-charge. (Old CC paver blocks shall be supplied by the department free of cost.)						
	Laying CC paver block						
	CC paver block	1	1000.000	1.200			1200.000
	Total						1200.000
	Total Quantity in sqm						1200.000
6	Road Restoration Charges						
6.001	4.1.6						
	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level:1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size)						
	CC 1:3:6with 40 mm B/S						
	Road restoration	1	3000.000	1.200	0.100		360.000
	Total						360.000
	Total Quantity in cum						360.000
6.002	4.1.3						
	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level:1:2:4 (cement : 2 coarse sand (zone-III) : 4 graded stone aggregate 20 mm nominal size)						
	CC 1:2:4 with 20 mm B/S						
	Road restoration	1	3000.000	1.200	0.100		360.000
	Total						360.000
	Total Quantity in cum						360.000
7	Road Restoration Charges to be remitted to other agencies						
7.001	OD42308/2022-2023						
	Road restoration charges for Berm cutting as per 30.07.2020G.O(Ms) N0.59/2020/PWD dated						
	Berm cutting						
	Road restoration	1	6000.000	1.000			6000.000
	Total						6000.000
	Total Quantity in sqm						6000.000

SI No	Specification	No	Length	Width	Depth	Cf	Quantity
7.002	OD42421/2022-2023						
	Road restoration charges for shoulder cutting as per 30.07.2020G.O(Ms) N0.59/2020/PWD dated						
	Shoulder cutting						
	Road restoration	1	5000.000	1.000			5000.000
	Total						5000.000
						Total Quantity in sqm	5000.000
7.003	OD42323/2022-2023						
	Road restoration charges for concrete road surface						
	Concreting						
	Road restoration	1	1500.000	1.000			1500.000
	Total						1500.000
						Total Quantity in sqm	1500.000
8	Renovation of Existing Sump at Koovappilly						
8.001	26.35.3						
	Providing and injecting approved grout in proportion recommended by the manufacturer into cracks/honey-comb area of concrete/masonry by suitable gun/pump at required pressure including cutting of nipples after curing etc. complete as per directions of Engineer-in-Charge. (The payment shall be made on the basis of actual weight of approved grout injected.)Epoxy injection grout in concrete/RCC work of approved make						
	Providing approved Epoxy injection grout in concrete						
	Epoxy injection grout in concrete	1	15.000				15.000
	Total						15.000
						Total Quantity in kg	15.000
8.002	13.1.1						
	12 mm cement plaster of mix:1:4 (1 cement : 4 fine sand)						
	12mm cement plaster of mix 1:4						
	Side wall - out side	1	43.200	3.300			142.560
Side wall - roof slab top and under side	1	46.200	0.750			34.650	
	Total						177.210
						Total Quantity in sqm	177.210
8.003	13.7.1						
	12 mm cement plaster finished with a floating coat of neat cement of mix:1:3 (1 cement : 3 fine sand)						
	12mm cement plaster of mix 1:3						

SI No	Specification	No	Length	Width	Depth	Cf	Quantity
	Side wall - in side	1	40.800	3.300			134.640
	column	4	1.200	3.300			15.840
	Total						150.480
	Total Quantity in sqm						150.480
8.004	13.21						
	Extra for providing and mixing water proofing material in cement plaster work in proportion recommended by the manufacturers.						
	Providing water proofing compound in cement plastering.						
	Providing water proofing compound in cement plastering.	1	135.000			4.940000	666.900
	Total						666.900
	Total Quantity in kg						666.900
8.005	13.43.1						
	Applying one coat of water thinnable cement primer of approved brand and manufacture on wall surface:Water thinnable cement primer						
	Applying one coat of water thinnable cement primer						
	Qty same as item no. 1	1	177.210				177.210
	Total						177.210
	Total Quantity in sqm						177.210
8.006	13.60.1						
	Wall painting with acrylic emulsion paint of approved brand and manufacture to give an even shade:Two or more coats on new work						
	Wall painting with acrylic emulsion paint						
	Qty same as item no. 1	1	177.210				177.210
	Total						177.210
	Total Quantity in sqm						177.210
8.007	13.71						
	Lettering with black Japan pint of approved brand and manufacture						
	Lettering						
	Lettering	100				15.000000	1500.000
	Total						1500.000
	Total Quantity in per Letter per cm height						1500.000

ABSTRACT ESTIMATE

Jal Jeevan Mission (JJM)-JJM-WSS to Kudayathoor panchayath in Idukki District.-Providing Distribution System and Providing FHTC to various zones- package II-General Civil Work

SI No	Specification	Quantity	Rate	Amount
1	Cost of materials			
1.001	100.98.115			
	Supply of DI K9 Pipe Conforming to IS 8329/2000, 100mm Dia.			
	Net Total	6611.000metre	@1257.56/metre	8313729.16
1.002	100.98.116			
	Supply of DI K9 Pipe Conforming to IS 8329/2000, 150mm Dia.			
	Net Total	3806.000metre	@1890.46/metre	7195090.76
1.003	100.98.117			
	Supply of DI K9 Pipe Conforming to IS 8329/2000, 200mm Dia.			
	Net Total	1215.500metre	@2589.09/metre	3147038.90
1.004	100.98.138			
	Supply of HDPE Pipe PE 100 (IS 4984/1995), 8kg, 160mm Outer Dia.			
	Net Total	204.000metre	@689.21/metre	140598.84
1.005	100.98.155			
	Supply of HDPE Pipe PE 100 (IS 4984/1995), 10kg, 110mm Outer Dia.			
	Net Total	3090.000metre	@385.56/metre	1191380.40
1.006	100.98.195			
	Supply of HDPE Pipe PE 100 (IS 4984/1995), 16kg, 110mm Outer Dia.			
	Net Total	3798.000metre	@557.74/metre	2118296.52
1.007	100.98.154			
	Supply of HDPE Pipe PE 100 (IS 4984/1995), 10kg, 90mm Outer Dia.			
	Net Total	17694.000metre	@264.59/metre	4681655.46
1.008	100.98.134			
	Supply of HDPE Pipe PE 100 (IS 4984/1995), 8kg, 90mm Outer Dia.			
	Net Total	702.000metre	@212.57/metre	149224.14
1.009	100.98.194			
	Supply of HDPE Pipe PE 100 (IS 4984/1995), 16kg, 90mm Outer Dia.			

SI No	Specification	Quantity	Rate	Amount
	Net Total	30108.000metre	@376.08/metre	11323016.64
1.010	OD6667/2022-2023 Supply of 100mm GI (M) pipes			
	Net Total	110.000metre	@1341.53/metre	147568.30
1.011	OD41086/2022-2023 Supply of 150mm GI (M) pipes			
	Net Total	60.000metre	@2090.70/metre	125442.00
1.012	100.98.440 Supply of CI Air Valve, Conforming to IS 14848 - 2000, Single Orifice, Small Orifice Type S1, Size 25mm.			
	Net Total	55.000no	@5636.76/no	310021.80
1.013	100.98.445 Supply of CI Air Valve, Conforming to IS 14848 - 2000, Double Orifice Type DS2, Size 40mm.			
	Net Total	15.000no	@6950.42/no	104256.30
1.014	100.98.457 Supply of CI Double Flanged Sluice Valve Conforming to IS 14846 - 2000, Sluice Valve with Cap PN 1.6, Size 80mm.			
	Net Total	48.000no	@6624.03/no	317953.44
1.015	100.98.458 Supply of CI Double Flanged Sluice Valve Conforming to IS 14846 - 2000, Sluice Valve with Cap PN 1.6, Size 100mm.			
	Net Total	15.000no	@9003.95/no	135059.25
1.016	100.98.460 Supply of CI Double Flanged Sluice Valve Conforming to IS 14846 - 2000, Sluice Valve with Cap PN 1.6, Size 150mm.			
	Net Total	5.000no	@13396.74/no	66983.70
1.017	100.98.461 Supply of CI Double Flanged Sluice Valve Conforming to IS 14846 - 2000, Sluice Valve with Cap PN 1.6, Size 200mm.			
	Net Total	2.000no	@23723.64/no	47447.28
			Heading Total(Rs)	39514762.89
2	Working charge for Distribution System			
2.001	100.1.1 Excavating trenches of required width for pipes, cables, etc., including excavation for sockets, and dressing of sides, ramming of bottoms, depth up to 1.5m, including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20cm in depth, including consolidating each deposited layer by ramming,			

SI No	Specification	Quantity	Rate	Amount
	watering, etc., and disposing of surplus excavated soil as directed, within a lead of 50m, in all kinds of soil.			
	Net Total	25881.304cu m	@579.88/cum	15008050.5 6
2.002	100.1.5			
	Excavating trenches of required width for pipes, cables, etc., including excavation for sockets, and dressing of sides, ramming of bottoms, depth up to 1.5m, including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20cm in depth, including consolidating each deposited layer by ramming, watering, etc., and disposing of surplus excavated soil as directed, within a lead of 50 m, in Ordinary Rock.			
	Net Total	7394.658cum	@842.08/cum	6226893.61
2.003	100.2.7			
	Excavating trenches of required width for pipes, cables, etc., including excavation for sockets, and dressing of sides, ramming of bottoms, depth up to 1.5m, including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20cm in depth, including consolidating each deposited layer by ramming, watering, etc., and disposing of surplus excavated soil as directed, within a lead of 50m, in Medium Rock where Blasting is Prohibited.			
	Net Total	1848.665cum	@1400.34/cum	2588759.55
2.004	100.4.1			
	Excavating in hard rock for trenches by blasting for laying pipes and stacking useful materials for measurements and disposing unserviceable materials within the initial lead of 50m and lift up to 1.50m (depth from 0.0m to 1.50m) and providing protection by earth filled cement bags during blasting to avoid damages to nearby structures (200 Nos. of earth filled cement bags for 10m ³ of blasting)			
	Net Total	1848.665cum	@4094.08/cum	7568582.40
2.005	50.2.25.1			
	Filling with contractor's own earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20 cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift up to 1.5 m as per direction of site Engineer-in-charge			
	Net Total	1831.000cum	@548.87/cum	1004980.97
2.006	100.8.1			
	Fencing one side of trenches, 1.50m height with two rows of 10cm plastic caution tape in vertical casuarina pole (girth 15cm to 24cm) fixed at 2m intervals.			
	Net Total	20000.000met re	@28.84/metre	576800.00
2.007	100.59.1			
	Cutting the bituminous / concrete roads with cutting machine for a minimum depth of 200mm along the sides of proposed alignment of the pipe to be laid without causing any damage to other utilities, including the charges for hire and conveyance of tools and plant, cost of consumables and charges for lighting, watching, ribbon fencing, caution boards, traffic diversion, and as per the direction of departmental officers etc. complete, before carrying out the demolition of bituminous / concrete road by			

SI No	Specification	Quantity	Rate	Amount
	mechanical means and carrying out the excavation.			
	Net Total	20280.000metre	@31.77/metre	644295.60
2.008	15.59			
	Dismantling of flexible pavement (bituminous courses) by mechanical means and disposal of dismantled material up to a lead of 1 kilo metre, as per direction of Engineer-in-charge.			
	Net Total	2014.000cum	@394.70/cum	794925.80
2.009	100.10.1			
	Laying HDPE pipes (IS : 4984) on land portion including conveying within initial lead and aligning the pipes, electro-fusion welding using automatic or semi-automatic electrofusion machines, testing the pipeline thus fabricated to suit the hydraulic working pressure and after testing, aligning the pipeline, lowering the pipe in position into the trenches already made, testing the line to suitable pressure with potable water before back filling and levelling the trenches including all labour charge, hire for appliances etc., complete but excluding cost of pipe and fittings: 90mm Nominal Outer Diameter pipes.			
	Net Total	48497.000metre	@97.37/metre	4722152.89
2.010	100.10.2			
	Laying HDPE pipes (IS : 4984) on land portion including conveying within initial lead and aligning the pipes, electro-fusion welding using automatic or semi-automatic electrofusion machines, testing the pipeline thus fabricated to suit the hydraulic working pressure and after testing, aligning the pipeline, lowering the pipe in position into the trenches already made, testing the line to suitable pressure with potable water before back filling and levelling the trenches including all labour charge, hire for appliances etc., complete but excluding cost of pipe and fittings: 110mm Nominal Outer Diameter Pipes.			
	Net Total	6883.000metre	@132.06/metre	908968.98
2.011	100.10.5			
	Laying HDPE pipes (IS : 4984) on land portion including conveying within initial lead and aligning the pipes, electro-fusion welding using automatic or semi-automatic electrofusion machines, testing the pipeline thus fabricated to suit the hydraulic working pressure and after testing, aligning the pipeline, lowering the pipe in position into the trenches already made, testing the line to suitable pressure with potable water before back filling and levelling the trenches including all labour charge, hire for appliances etc., complete but excluding cost of pipe and fittings: 160mm Nominal Outside Diameter Pipes.			
	Net Total	203.000metre	@224.62/metre	45597.86
2.012	18.12.8			
	Providing and fixing G.I. pipes complete with G.I fittings including trenching and refilling etc. External work 80 mm dia nominal bore			
	Net Total	3270.000metre	@1064.49/metre	3480882.30

SI No	Specification	Quantity	Rate	Amount
2.013	100.12.9			
	Conveying and fixing G.I. pipes complete with G.I. fittings including trenching and refilling etc., but excluding cost of pipes and fittings for External work: 100mm diameter nominal bore.			
	Net Total	110.000metre	@245.48/metre	27002.80
2.014	100.12.11			
	Conveying and fixing G.I. pipes complete with G.I. fittings including trenching and refilling etc., but excluding cost of pipes and fittings for External work: 150mm diameter nominal bore.			
	Net Total	60.000metre	@304.13/metre	18247.80
2.015	100.14.1			
	Conveying and laying S&S Centrifugally Cast (Spun) / Ductile Iron Pipes conforming to IS: 8329 excluding cost of pipes and specials: 100mm diameter Ductile Iron Class K-9 Pipes.			
	Net Total	6476.000metre	@61.40/metre	397626.40
2.016	100.14.2			
	Conveying and laying S&S Centrifugally Cast (Spun) / Ductile Iron Pipes conforming to IS: 8329 excluding cost of pipes and specials: 150mm diameter Ductile Iron Class K-9 Pipes.			
	Net Total	3729.000metre	@91.51/metre	341240.79
2.017	100.14.3			
	Conveying and laying S&S Centrifugally Cast (Spun) / Ductile Iron Pipes conforming to IS: 8329 excluding cost of pipes and specials: 200mm diameter Ductile Iron Class K-9 Pipes.			
	Net Total	1191.000metre	@127.49/metre	151840.59
2.018	18.83.2			
	Labour for cutting C.I. pipe with steel saw.100 mm diameter C.I. pipe			
	Net Total	90.000Each Cut	@179.40/Each Cut	16146.00
2.019	18.83.4			
	Labour for cutting C.I. pipe with steel saw.150 mm diameter C.I. pipe			
	Net Total	52.000Each Cut	@337.10/Each Cut	17529.20
2.020	18.83.5			
	Labour for cutting C.I. pipe with steel saw.200 mm diameter C.I. pipe			
	Net Total	40.000Each Cut	@449.61/Each Cut	17984.40
2.021	18.67.1			

SI No	Specification	Quantity	Rate	Amount
	Providing and laying S & S C.I. Standard specials suitable for mechanical jointing as per IS 13382:Upto 300 mm dia			
	Net Total	4.170quintal	@14708.68/quintal	61335.20
2.022	18.68.1			
	Providing and laying D.I specials of class K - 12 suitable for push - on jointing as per IS : 9523 :Upt 600 mm dia			
	Net Total	48.230quintal	@21003.05/quintal	1012977.10
2.023	18.70.1			
	Providing push - on-joints to Centrifugally (Spun) Cast Iron Pipes or Ductile Iron Pipes including testing of joints and including the cost of rubber gasket:100 mm dia pipes			
	Net Total	1080.000joint	@112.62/joint	121629.60
2.024	18.70.2			
	Providing push - on-joints to Centrifugally (Spun) Cast Iron Pipes or Ductile Iron Pipes including testing of joints and including the cost of rubber gasket:150 mm dia pipes			
	Net Total	622.000joint	@184.10/joint	114510.20
2.025	18.70.3			
	Providing push - on-joints to Centrifugally (Spun) Cast Iron Pipes or Ductile Iron Pipes including testing of joints and including the cost of rubber gasket:200 mm dia pipes			
	Net Total	200.000joint	@270.11/joint	54022.00
2.026	18.30.2			
	Providing flanged joints to double flanged C.I./ D.I pipes and specials, including testing of joints:100 mm diameter pipe			
	Net Total	24.000no	@325.59/no	7814.16
2.027	18.30.4			
	Providing flanged joints to double flanged C.I./ D.I pipes and specials, including testing of joints:150 mm diameter pipe			
	Net Total	12.000no	@402.30/no	4827.60
2.028	18.30.5			
	Providing flanged joints to double flanged C.I./ D.I pipes and specials, including testing of joints:200 mm diameter pipe			
	Net Total	8.000no	@436.82/no	3494.56
2.029	100.32.1			
	Conveying and fixing C. I. Single Acting Air Valve of approved quality with bolts, nuts, rubber insertions etc., complete, but excluding the cost of air valve (tail pieces, if required, will be paid separately): 25mm Single Acting Air Valve.			
	Net Total	55.000no	@146.63/no	8064.65

SI No	Specification	Quantity	Rate	Amount
2.030	100.32.2			
	Conveying and fixing C. I. Single Acting Air Valve of approved quality with bolts, nuts, rubber insertions etc., complete, but excluding the cost of air valve (tail pieces, if required, will be paid separately): 40mm Single Acting Air Valve.			
	Net Total	15.000no	@184.44/no	2766.60
2.031	100.31.1.1			
	Conveying and fixing C.I. sluice valves (with cap) by providing bolts, nuts, rubber insertions etc., complete, but excluding the cost of the valve (tail pieces, if required, will be paid separately): 80mm diameter, Class I.			
	Net Total	48.000no	@613.80/no	29462.40
2.032	100.31.1.2			
	Conveying and fixing C.I. sluice valves (with cap) by providing bolts, nuts, rubber insertions etc., complete, but excluding the cost of the valve (tail pieces, if required, will be paid separately): 100mm diameter, Class I.			
	Net Total	15.000no	@925.37/no	13880.55
2.033	100.31.1.4			
	Conveying and fixing C.I. sluice valves (with cap) by providing bolts, nuts, rubber insertions etc., complete, but excluding the cost of the valve (tail pieces, if required, will be paid separately): 150mm diameter, Class I.			
	Net Total	5.000no	@1253.32/no	6266.60
2.034	100.31.1.5			
	Conveying and fixing C.I. sluice valves (with cap) by providing bolts, nuts, rubber insertions etc., complete, but excluding the cost of the valve (tail pieces, if required, will be paid separately): 200mm diameter, Class I.			
	Net Total	2.000no	@1625.85/no	3251.70
2.035	OD41513/2022-2023			
	Supply and fixing of stainless steel spring loaded pressure relief valve as per IS 9739(1981)			
	Net Total	30.000no	@6229.37/no	186881.10
2.036	100.35.1			
	Testing 100mm DI/CI pipeline with potable water to the required test pressure 100 mm dia			
	Net Total	6476.000metre	@24.36/metre	157755.36
2.037	100.35.2			
	Testing 150mm DI/CI pipeline with potable water to the required test pressure 150 mm dia Observed Data derived from item no.1018 of PHED DATA			
	Net Total	3729.000metre	@32.86/metre	122534.94
2.038	100.35.3			

SI No	Specification	Quantity	Rate	Amount
	Testing 200mm DI/CI pipeline with potable water to the required test pressure 200 mm dia Observed Data derived from item no.1020 of PHED DATA			
		Net Total	1191.000metre @41.66/metre	49617.06
2.039	100.37.5.1 In situ fabrication of M.S. pipes of size 100mm (I.D.) using 8mm thick M.S. plate including cost and conveyance charges of M.S. plate, all fabrication charges, charges of painting the steel work with two or more coat deluxe multi surface paint to give an even shade over an under-coat of primer etc., complete.			
		Net Total	150.000metre @4182.35/metre	627352.50
2.040	100.37.5.2 Fabricating M.S. flanges of diameter 100mm using 12mm thick M.S. plate including cost and conveyance charges of M.S. plate, all fabrication charges, charges of painting the steel work with two or more coat deluxe multi surface paint to give an even shade over an under-coat of primer etc., complete: For pipes fabricated with 8mm thick M.S. plates.			
		Net Total	6.000no @1161.73/no	6970.38
2.041	100.37.5.3 Cutting 100mm (I.D.) M.S. pipes for making bends and other specials by gas cutting including cost of gas, all labour and hire charges of tools etc., complete: For pipes fabricated with 8mm thick M.S. plates.			
		Net Total	15.000no @119.81/no	1797.15
2.042	100.37.5.4 Welding 100mm (I.D.) M.S. pipes for making bends and other specials by gas/electric welding machine including cost of gas and welding rods, all labour and hire charges of tools etc., complete: For pipes fabricated with 8mm thick M.S. plates.			
		Net Total	15.000no @452.90/no	6793.50
2.043	100.37.5.5 Grinding cut and weld edges of 100mm (I.D.) M.S. pipes during fabrication work including all labour and hire charges of tools etc., complete: For pipes fabricated with 8mm thick M.S. plates.			
		Net Total	15.000no @85.07/no	1276.05
2.044	100.37.6.1 In situ fabrication of M.S. pipes of size 150mm (I.D.) using 8mm thick M.S. plate including cost and conveyance charges of M.S. plate, all fabrication charges, charges of painting the steel work with two or more coat deluxe multi surface paint to give an even shade over an under-coat of primer etc., complete.			
		Net Total	100.000metre @5174.49/metre	517449.00
2.045	100.37.6.2 Fabricating M.S. flanges of diameter 150mm using 12mm thick M.S. plate including cost and conveyance charges of M.S. plate, all fabrication charges, charges of painting the steel work with two or more coat deluxe multi surface paint to give an			

SI No	Specification	Quantity	Rate	Amount
	even shade over an under-coat of primer etc., complete: For pipes fabricated with 8mm thick M.S. plates.			
		Net Total	5.000no @1544.03/no	7720.15
2.046	100.37.6.3			
	Cutting 150mm (I.D.) M.S. pipes for making bends and other specials by gas cutting including cost of gas, all labour and hire charges of tools etc., complete: For pipes fabricated with 8mm thick M.S. plates.			
		Net Total	10.000no @171.45/no	1714.50
2.047	100.37.6.4			
	Welding 150mm (I.D.) M.S. pipes for making bends and other specials by gas/electric welding machine including cost of gas and welding rods, all labour and hire charges of tools etc., complete: For pipes fabricated with 8mm thick M.S. plates.			
		Net Total	10.000no @648.09/no	6480.90
2.048	100.37.6.5			
	Grinding cut and weld edges of 150mm (I.D.) M.S. pipes during fabrication work including all labour and hire charges of tools etc., complete: For pipes fabricated with 8mm thick M.S. plates.			
		Net Total	10.000no @121.73/no	1217.30
2.049	100.37.7.1			
	In situ fabrication of M.S. pipes of size 200mm (I.D.) using 8mm thick M.S. plate including cost and conveyance charges of M.S. plate, all fabrication charges, charges of painting the steel work with two or more coat deluxe multi surface paint to give an even shade over an under-coat of primer etc., complete.			
		Net Total	60.000metre @6165.53/metre	369931.80
2.050	100.37.7.2			
	Fabricating M.S. flanges of diameter 200mm using 12mm thick M.S. plate including cost and conveyance charges of M.S. plate, all fabrication charges, charges of painting the steel work with two or more coat deluxe multi surface paint to give an even shade over an under-coat of primer etc., complete: For pipes fabricated with 8mm thick M.S. plates.			
		Net Total	3.000no @2081.10/no	6243.30
2.051	100.37.7.3			
	Cutting 200mm (I.D.) M.S. pipes for making bends and other specials by gas cutting including cost of gas, all labour and hire charges of tools etc., complete: For pipes fabricated with 8mm thick M.S. plates.			
		Net Total	8.000no @223.11/no	1784.88
2.052	100.37.7.4			
	Welding 200mm (I.D.) M.S. pipes for making bends and other specials by gas/electric welding machine including cost of gas and welding rods, all labour and hire charges of tools etc., complete: For pipes fabricated with 8mm thick M.S. plates.			
		Net Total	8.000no @843.32/no	6746.56
2.053	100.37.7.5			

SI No	Specification	Quantity	Rate	Amount
	Grinding cut and weld edges of 200mm (I.D.) M.S. pipes during fabrication work including all labour and hire charges of tools etc., complete: For pipes fabricated with 8mm thick M.S. plates.			
	Net Total	8.000no	@158.40/no	1267.20
2.054	2.8.1			
	Earth work in excavation by mechanical means (Hydraulic excavator) /manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan), including dressing of sides and ramming of bottoms, lift up to 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m.All kinds of soil			
	Net Total	118.125cum	@309.99/cum	36617.57
2.055	4.1.3			
	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level:1:2:4 (cement : 2 coarse sand (zone-III) : 4 graded stone aggregate 20 mm nominal size)			
	Net Total	548.275cum	@8340.91/cum	4573112.43
2.056	5.1.2			
	Providing and laying in position specified grade of reinforced cement concrete, excluding the cost of centering, shuttering, finishing and reinforcement - All work up to plinth level:1:1:5:3 (1 cement 1.5 coarse sand :3 graded stone aggregate 20 mm nominal size			
	Net Total	49.683cum	@9483.13/cum	471150.35
2.057	5.9.2			
	Centering and shuttering including strutting, etc. and removal of form for:Walls (any thickness) including attached pilasters, buttresses, plinth and string courses etc.			
	Net Total	1417.950sqm	@748.62/sqm	1061505.73
2.058	5.22.6			
	Steel reinforcement for R.C.C work including straightening, cutting, bending, placing in position and binding all complete upto plinth levelThermo - Mechanically Treated bars of grade Fe-500D or more			
	Net Total	3250.000kilo gram	@102.61/kilogram	333482.50
			Heading Total(Rs)	54560213.6 3
3	Providing FHTC to various Zones			
3.001	100.60.13.1.2			
	Providing 15mm (1/2 inch) house connection with 15mm water meter from existing PVC / HDPE mains up to 110 mm dia., up to a length of 5m using 20mm (1/2 inch) PE Pipe, PE80, PN16, Conforming to IS 4984: 2016 or later edition and PP PN 16 Compression / GM / Brass specials viz. brass ferrule, brass hexagonal nipple, GM full way wheel valve, bend, MTA, FTA, couplers, PVC Service Saddle of suitable size etc. and connecting with the mains, testing the joints etc. complete including trenching and refilling in all kinds of soil up to a depth of 1.50m for main line tracing and trench of average cross section 0.3m x 0.75m for laying connection pipe and			

SI No	Specification	Quantity	Rate	Amount
	service pipe, fixing water meter, lighting, watching, providing caution boards, traffic control etc. complete including cost of materials, hire for tools, cost of consumables and labour charges, including the cost of tested Class B Multijet water meter with ISI mark and weather resistant PP / PE meter box of minimum size 300mm x 200mm x 150mm, but excluding charges for cutting the concrete / tarred / bituminous roads etc, and as per the direction of the departmental officers.			
	Net Total	1260.000no	@7137.54/no	8993300.40
3.002	100.60.13.3.2			
	Providing 20mm (3/4 inch) house connection with 15mm water meter from existing PVC / HDPE mains up to 110 mm dia., up to a length of 5m using 25mm (3/4 inch) PE Pipe, PE80, PN16, Conforming to IS 4984: 2016 or later edition and PP PN 16 Compression / GM / Brass specials viz. brass ferrule, brass hexagonal nipple, GM full way wheel valve, bend, MTA, FTA, couplers, PVC Service Saddle of suitable size etc. and connecting with the mains, testing the joints etc. complete including trenching and refilling in all kinds of soil up to a depth of 1.50m for main line tracing and trench of average cross section 0.3m x 0.75m for laying connection pipe and service pipe, fixing water meter, lighting, watching, providing caution boards, traffic control etc. complete including cost of materials, hire for tools, cost of consumables and labour charges, including the cost of tested Class B Multijet water meter and weather with ISI mark resistant PP / PE meter box of minimum size 300mm x 200mm x 150mm, but excluding charges for cutting the concrete / tarred / bituminous roads etc, and as per the direction of the departmental officers.			
	Net Total	560.000no	@8021.00/no	4491760.00
3.003	100.60.13.7.2			
	Providing 15mm (1/2 inch) house connection with 15mm water meter from existing CI mains up to 125 mm dia., up to a length of 5 m using 20mm (1/2 inch) PE Pipe, PE80, PN16, Conforming to IS 4984: 2016 or later edition and PP PN 16 Compression / GM / Brass specials viz. brass ferrule, brass hexagonal nipple, GM full way wheel valve, bend, MTA, FTA, couplers etc. and connecting with the mains, testing the joints etc. complete including trenching and refilling in all kinds of soil up to a depth of 1.50m for main line tracing and trench of average cross section 0.3m x 0.75m for laying connection pipe and service pipe, fixing water meter, lighting, watching, providing caution boards, traffic control etc. complete including cost of materials, hire for tools, cost of consumables and labour charges, including the cost of tested Class B Multijet water meter with ISI mark and weather resistant PP / PE meter box of minimum size 300mm x 200mm x 150mm, but excluding charges for cutting the concrete / tarred / bituminous roads etc, and as per the direction of the departmental officers			
	Net Total	140.000no	@8321.22/no	1164970.80
3.004	100.60.13.9.2			
	Providing 20mm (3/4 inch) house connection with 15mm water meter from existing CI mains up to 125 mm dia., up to a length of 5 m using 25mm (3/4 inch) PE Pipe, PE80, PN16, Conforming to IS 4984: 2016 or later edition and PP PN 16 Compression / GM / Brass specials viz. brass ferrule, brass hexagonal nipple, GM full way wheel valve, bend, MTA, FTA, couplers etc. and connecting with the mains, testing the joints etc. complete including trenching and refilling in all kinds of soil up to a depth of 1.50m for main line tracing and trench of average cross section 0.3m x 0.75m for laying connection pipe and service pipe, fixing water meter, lighting, watching, providing caution boards, traffic control etc. complete including cost of			

SI No	Specification	Quantity	Rate	Amount
	materials, hire for tools, cost of consumables and labour charges, including the cost of tested Class B Multijet water meter with ISI mark and weather resistant PP / PE meter box of minimum size 300mm x 200mm x 150mm, but excluding charges for cutting the concrete / tarred / bituminous roads etc, and as per the direction of the departmental officers			
	Net Total	75.000no	@9204.69/no	690351.75
3.005	100.60.14.7.2			
	Providing 15mm (1/2 inch) house connection with 15mm water meter from existing CI mains from 150mm to 200mm dia., up to a length of 5 m using 20mm (1/2 inch) PE Pipe, PE80, PN16, Conforming to IS 4984: 2016 or later edition and PP PN 16 Compression / GM / Brass specials viz. brass ferrule, brass hexagonal nipple, GM full way wheel valve, bend, MTA, FTA, couplers etc. and connecting with the mains, testing the joints etc. complete including trenching and refilling in all kinds of soil up to a depth of 1.50m for main line tracing and trench of average cross section 0.3m x 0.75m for laying connection pipe and service pipe, fixing water meter, lighting, watching, providing caution boards, traffic control etc. complete including cost of materials, hire for tools, cost of consumables and labour charges, including the cost of tested Class B Multijet water meter with ISI mark and weather resistant PP / PE meter box of minimum size 300mm x 200mm x 150mm, but excluding charges for cutting the concrete / tarred / bituminous roads etc, and as per the direction of the departmental officers.			
	Net Total	150.000no	@8624.50/no	1293675.00
3.006	100.60.14.9.2			
	Providing 20mm (3/4 inch) house connection with 15mm water meter from existing CI mains from 150mm to 200mm dia., up to a length of 5 m using 25mm (3/4 inch) PE Pipe, PE80, PN16, Conforming to IS 4984: 2016 or later edition and PP PN 16 Compression / GM / Brass specials viz. brass ferrule, brass hexagonal nipple, GM full way wheel valve, bend, MTA, FTA, couplers etc. and connecting with the mains, testing the joints etc. complete including trenching and refilling in all kinds of soil up to a depth of 1.50m for main line tracing and trench of average cross section 0.3m x 0.75m for laying connection pipe and service pipe, fixing water meter, lighting, watching, providing caution boards, traffic control etc. complete including cost of materials, hire for tools, cost of consumables and labour charges, including the cost of tested Class B Multijet water meter with ISI mark and weather resistant PP / PE meter box of minimum size 300mm x 200mm x 150mm, but excluding charges for cutting the concrete / tarred / bituminous roads etc, and as per the direction of the departmental officers.			
	Net Total	65.000no	@9507.98/no	618018.70
3.007	100.60.21.1.1			
	Providing 15mm (1/2 inch) GM Air Valve in the water meter assembly for 15mm water connection, using 20mm (1/2 inch) PE Pipe, PE80, PN16, Conforming to IS 4984: 2016 or later edition and PP PN 16 Compression specials including cost of materials, consumables, hire for tools and labour charges etc. complete and as per the directions of the department officers.			
	Net Total	1550.000no	@996.49/no	1544559.50
3.008	100.60.21.2.1			
	Providing 20mm (3/4 inch) GM Air Valve in the water meter assembly for 20mm			

SI No	Specification	Quantity	Rate	Amount
	water connection, using 25mm (3/4 inch) PE Pipe, PE80, PN16, Conforming to IS 4984: 2016 or later edition and PP PN 16 Compression specials including cost of materials, consumables, hire for tools and labour charges etc. complete and as per the directions of the department officers.			
	Net Total	700.000no	@1252.94/no	877058.00
3.009	100.60.23.3.1			
	Providing 15mm PVC Tap in the water meter assembly for 15mm (1/2 inch) water connection, using 20mm (1/2 inch) Indian Standard uPVC Class 6 pipes, uPVC specials and PP PN 16 Compression specials including cost of materials, consumables, hire charges for tools and labour charges etc. complete and as per the direction of departmental officers.			
	Net Total	1550.000no	@683.67/no	1059688.50
3.010	100.60.23.4.1			
	Providing 15mm PVC Tap in the water meter assembly for 20mm (3/4 inch) water connection, using 25mm (3/4 inch) Indian Standard Class 6 uPVC pipes, uPVC specials and PP PN 16 Compression specials including cost of materials, consumables, hire charges for tools and labour charges etc. complete and as per the direction of departmental officers.			
	Net Total	700.000no	@785.68/no	549976.00
3.011	100.60.15.1.1			
	Providing additional length of house connection pipe using 20 mm (1/2 inch) PE Pipe, PE80, PN16, Conforming to IS 4984: 2016 or later edition and PN16 specials and testing the joints etc., by trenching and refilling in all kinds of soil with trench of average cross section 0.3m x 0.75m for laying of connection pipe and service pipe, lighting, watching, providing caution boards, traffic control etc., including cost of materials, hire for tools, cost of consumables and labour charges etc. complete, but excluding the cost of cutting of concrete / tarred / bituminous roads etc., and as per the directions of the department officers.			
	Net Total	27900.000metre	@179.74/metre	5014746.00
3.012	100.60.15.2.1			
	Providing additional length of house connection pipe using 25 mm (3/4 inch) PE Pipe, PE80, PN16, Conforming to IS 4984: 2016 or later edition and PN 16 specials and testing the joints etc., by trenching and refilling in all kinds of soil with trench of average cross section 0.3m x 0.75m for laying of connection pipe and service pipe, lighting, watching, providing caution boards, traffic control etc., including cost of materials, hire for tools, cost of consumables and labour charges etc. complete, but excluding the cost of cutting of concrete / tarred / bituminous roads etc., and as per the directions of the department officers.			
	Net Total	28000.000metre	@195.27/metre	5467560.00
3.013	100.59.1			
	Cutting the bituminous / concrete roads with cutting machine for a minimum depth of 200mm along the sides of proposed alignment of the pipe to be laid without causing any damage to other utilities, including the charges for hire and conveyance of tools and plant, cost of consumables and charges for lighting, watching, ribbon fencing,			

SI No	Specification	Quantity	Rate	Amount
	caution boards, traffic diversion, and as per the direction of departmental officers etc. complete, before carrying out the demolition of bituminous / concrete road by mechanical means and carrying out the excavation.			
	Net Total	1840.000metre	@31.77/metre	58456.80
3.014	15.59			
	Dismantling of flexible pavement (bituminous courses) by mechanical means and disposal of dismantled material up to a lead of 1 kilo metre, as per direction of Engineer-in-charge.			
	Net Total	91.200cum	@394.70/cum	35996.64
3.015	100.60.8.1			
	Replacing the choked / damaged 15mm (1/2 inch) house connection with 15mm (1/2 inch) water meter from existing mains, up to a length of 5m using 20mm Indian Standard Class 6 uPVC pipe and uPVC / Brass specials viz. brass ferrule, Elbow, MTA, FTA, couplers etc. and connecting with the mains, testing the joints etc. complete including trenching and refilling in all kinds of soil up to a depth of 1.50m for main line tracing and trench of average cross section 0.3m x 0.75m for laying connection pipe and service pipe, safely removing & re-fixing existing water meter, lighting, watching, providing caution boards, traffic control etc. complete including cost of materials, hire for tools, cost of consumables and labour charges but excluding cost of water meter and meter box and excluding charges for cutting the concrete / tarred / bituminous roads and as per the directions of the department officers			
	Net Total	450.000no	@4031.21/no	1814044.50
3.016	100.60.8.2			
	Replacing the choked / damaged 20mm (3/4 inch) house connection with 20mm (3/4 inch) water meter from existing mains, up to a length of 5m using 25mm Indian Standard Class 6 uPVC pipe and uPVC / Brass specials viz. brass ferrule, Elbow, MTA, FTA, couplers etc. and connecting with the mains, testing the joints etc. complete including trenching and refilling in all kinds of soil up to a depth of 1.50m for main line tracing and trench of average cross section 0.3m x 0.75m for laying connection pipe and service pipe, safely removing & re-fixing existing water meter, lighting, watching, providing caution boards, traffic control etc. complete including cost of materials, hire for tools, cost of consumables and labour charges but excluding cost of water meter and meter box and excluding charges for cutting the concrete / tarred / bituminous roads and as per the directions of the department officers.			
	Net Total	313.000no	@4456.21/no	1394793.73
3.017	4.1.3			
	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level:1:2:4 (cement : 2 coarse sand (zone-III) : 4 graded stone aggregate 20 mm nominal size)			
	Net Total	68.400cum	@8340.91/cum	570518.24
			Heading Total(Rs)	35639474.56
4	Application fee and connections			

SI No	Specification	Quantity	Rate	Amount
4.001	OD7064/2022-2023			
	Charges for application fee, connection fee, meter testing fee etc for connections having length below 30 m;			
	Net Total	1550.000no	@575.00/no	891250.00
4.002	OD7065/2022-2023			
	Charges for application fee, connection fee, meter testing fee etc for connections having length above 30 m;			
	Net Total	700.000no	@1075.00/no	752500.00
4.003	OD42319/2022-2023			
	Geo Tagging to the new Service connections			
	Net Total	2250.000no	@20.00/no	45000.00
Heading Total(Rs)				1688750.00
5 Road Restoration Charges				
5.001	3.6			
	Excavation for roadwork in soil with hydraulic excavator of 0.9 cum bucket capacity including cutting and loading in tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and transporting to the embankment location within all lifts and lead upto 1000m			
	Net Total	6160.000cum	@48.79/cum	300546.40
5.002	4.1.B.2			
	Construction of granular sub-base by providing graded material, spreading in uniform layers with a motor grader on a prepared surface, mixing by mix in-place method with rotavator at OMC, and compacting with a vibratory roller to achieve the desired density, complete as per clause 401. Grading-VI - For sub-base cum drainage layer - Mix in Place Method			
	Net Total	2800.000cum	@3356.67/cum	9398676.00
5.003	4.12			
	Providing, laying, spreading and compacting graded stone aggregate to Wet Mix Macadam specification including premixing the Material with water at OMC in mechanical mix plant carriage of mixed Material by tipper to site, laying in uniform layers with paver in sub- base / base course on well prepared surface and compacting with vibratory roller to achieve the desired density.			
	Net Total	2800.000cum	@3375.91/cum	9452548.00
5.004	5.1.a			
	Providing and applying primer coat with bitumen emulsion (SS) on prepared surface of granular Base including clearing of road surface and spraying primer at the rate of 0.70 - 1.0 kg/sqm using mechanical means.			
	Net Total	15400.000sqm	@73.49/sqm	1131746.00
5.005	OD42503/2022-2023			
	Mix seal surfacing Providing, laying and rolling of close-graded premix surfacing material of 20mm thickness composed of 11.2mm to 0.9mm Type-A aggregate using			

SI No	Specification	Quantity	Rate	Amount	
	penetration grade bitumen to required line, grade and level to serve as wearing course on previously prepared base, including mixing in a suitable plant, laying and rolling with a three wheel 8-10 KN static roller and finishing to required level and grades as per Technical specification clause 509 of MORD (Usage of bitumen is 22.00Kg/(10m ²) By Manual Means				
		Net Total	13200.000sqm	@270.41/sqm	3569412.00
5.006	5.3.2.a				
	Providing and laying bituminous macadam with 80-100 TPH hot mix plant producing an average output of 75 tonnes per hour using crushed aggregates of specified grading premixed with a bituminous binder (VG 30), transported to the site, laid over a previously prepared surface with paver finisher to the required grade, level, and alignment and rolled as per clauses 501.6 and 501.7 to achieve the desired compaction For Grading II - (19 mm nominal size)				
		Net Total	110.000cum	@8758.31/cum	963414.10
5.007	5.6.1.a				
	Providing and laying bituminous concrete with 80-100 TPH hot mix plant producing an average output of 75 tonnes per hour using crushed aggregates of specified grading, premixed with a bituminous binder (NRMB) @ 5.2 percent of mix and filler, transporting the hot mix to work site, laying with a hydrostatic paver finisher with sensor control to the required grade, level, and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MORTH specification clause No. 507 complete in all respects For Grading - I (19 mm nominal size)				
		Net Total	78.000cum	@13072.20/cum	1019631.60
5.008	5.2.a				
	Providing and applying tack coat with bitumen emulsion (RS) using emulsion pressure distributor at the rate of 0.20 - 0.30 kg per sqm on the prepared bituminous surface cleaned with mechanical broom.				
		Net Total	4600.000sqm	@11.95/sqm	54970.00
5.009	OD41643/2022-2023				
	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.				
		Net Total	1200.000sqm	@850.51/sqm	1020612.00
5.010	OD41644/2022-2023				
	Laying old cement concrete interlocking paver blocks of any design/ shape laid in required line, level, curvature, colour and pattern over and including 50 mm thick compacted bed of coarse sand, filling the joints with fine sand etc. all complete as per the direction of Engineer-in-charge. (Old CC paver blocks shall be supplied by the department free of cost.)				
		Net Total	1200.000sqm	@2931.79/sqm	3518148.00
					Heading Total(Rs)
					30429704.10

SI No	Specification	Quantity	Rate	Amount	
6 Road Restoration Charges					
6.001	4.1.6	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level:1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size)			
		Net Total	360.000cum	@7527.05/cum	2709738.00
6.002	4.1.3	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level:1:2:4 (cement : 2 coarse sand (zone-III) : 4 graded stone aggregate 20 mm nominal size)			
		Net Total	360.000cum	@8340.91/cum	3002727.60
Heading Total(Rs)				5712465.60	
7 Road Restoration Charges to be remitted to other agencies					
7.001	OD42308/2022-2023	Road restoration charges for Berm cutting as per 30.07.2020G.O(Ms) N0.59/2020/PWD dated			
		Net Total	6000.000sqm	@321.29/sqm	1927740.00
7.002	OD42421/2022-2023	Road restoration charges for shoulder cutting as per 30.07.2020G.O(Ms) N0.59/2020/PWD dated			
		Net Total	5000.000sqm	@1366.76/sqm	6833800.00
7.003	OD42323/2022-2023	Road restoration charges for concrete road surface			
		Net Total	1500.000sqm	@4886.99/sqm	7330485.00
Heading Total(Rs)				16092025.00	
8 Renovation of Existing Sump at Koovappilly					
8.001	26.35.3	Providing and injecting approved grout in proportion recommended by the manufacturer into cracks/honey-comb area of concrete/masonry by suitable gun/pump at required pressure including cutting of nipples after curing etc. complete as per directions of Engineer-in-Charge. (The payment shall be made on the basis of actual weight of approved grout injected.)Epoxy injection grout in concrete/RCC work of approved make			
		Net Total	15.000kg	@973.43/kg	14601.45
8.002	13.1.1	12 mm cement plaster of mix:1:4 (1 cement : 4 fine sand)			
		Net Total	177.210sqm	@327.87/sqm	58101.84
8.003	13.7.1	12 mm cement plaster finished with a floating coat of neat cement of mix:1:3 (1			

SI No	Specification	Quantity	Rate	Amount
	cement : 3 fine sand)			
	Net Total	150.480sqm	@418.80/sqm	63021.02
8.004	13.21			
	Extra for providing and mixing water proofing material in cement plaster work in proportion recommended by the manufacturers.			
	Net Total	666.900kg	@1.47/kg	980.34
8.005	13.43.1			
	Applying one coat of water thinnable cement primer of approved brand and manufacture on wall surface:Water thinnable cement primer			
	Net Total	177.210sqm	@73.75/sqm	13069.24
8.006	13.60.1			
	Wall painting with acrylic emulsion paint of approved brand and manufacture to give an even shade:Two or more coats on new work			
	Net Total	177.210sqm	@158.06/sqm	28009.81
8.007	13.71			
	Lettering with black Japan pint of approved brand and manufacture			
	Net Total	1500.000per Letter per cm height	@5.82/per Letter per cm height	8730.00
	Heading Total(Rs)			186513.70
	Total Estimation PAC			183823909.48
10	Extra Charges			
9.001	Provision for GST			
		183823909.48	18.00%	33088303.71
	Grand Total			216912213.19
	Round off			87786.81
	Rounded Total(Rs)			217000000.00
	Rupees Twenty One Crore Seventy Lakh			