DETAILED ESTIMATE

Jal Jeevan Mission (JJM)-WSS - to Santhanpara, Rajakumary (Part) and Senapathy (Part) Panchayaths in Idukki District-Package IIIA-Supplying and Laying Distribution and providing FHTC in Rajakumary GP-Pipeline Work

Sl No	Specification	No	Length	Width	Depth	Cf	Quantity
1	Supplying , Laying and commissioning of Distribution- Cost of materials						
1.001	100.98.119						
	Supply of DI K9 Pipe Conforming to IS 8329/2000, 300mm Dia.						
	300 mm DI K9						
		1	1504.000				1504.000
	Spare pipe	1	38.000				38.000
	Reduction for MS pipe	-1	20.000				-20.000
	Total						**1522.000**
						Total Quantity in metre	**1522.000**
1.002	100.98.118						
	Supply of DI K9 Pipe Conforming to IS 8329/2000, 250mm Dia.						
	250 mm DI K9						
		1	2519.000				2519.000
	Spare pipe	1	63.000				63.000
	Reduction for MS pipe	-1	25.000				-25.000
	Total						**2557.000**
						Total Quantity in metre	**2557.000**
1.003	100.98.117						
	Supply of DI K9 Pipe Conforming to IS 8329/2000, 200mm Dia.						
	200 mm DI K9						
		1	3293.000				3293.000
	Spare pipe	1	83.000				83.000
	Reduction for MS pipe	-1	33.000				-33.000
	Total						**3343.000**
						Total Quantity in metre	**3343.000**
1.004	100.98.116						
	Supply of DI K9 Pipe Conforming to IS 8329/2000, 150mm Dia.						
	150 mm DI K9						
		1	1474.000				1474.000

Sl No	Specification	No	Length	Width	Depth	Cf	Quantity
	Spare pipe	1	37.000				37.000
	Deduction for MS pipe	-1	15.000				-15.000
	Total						**1496.000**
						Total Quantity in metre	**1496.000**
1.005	100.98.134						
	Supply of HDPE Pipe PE 100 (IS 4984/1995), 8kg, 90mm Outer Dia.						
	90mm HDPE 8kg						
		1	5466.000				5466.000
	Total						**5466.000**
						Total Quantity in metre	**5466.000**
1.006	OD99555/2022-2023						
	90mm HDPE Specials (8kg) (3% Cost of pipe)						
	90mm HDPE Specials(8kg)						
		1	5466.000				5466.000
	Total						**5466.000**
						Total Quantity in metre	**5466.000**
1.007	100.98.154						
	Supply of HDPE Pipe PE 100 (IS 4984/1995), 10kg, 90mm Outer Dia.						
	90mm HDPE 10kg						
		1	9057.000				9057.000
	Total						**9057.000**
						Total Quantity in metre	**9057.000**
1.008	OD100162/2022-2023						
	Specials for 90 mm HDPE pipe(10kg) (3% Cost of pipe)						
	Specials for 90 mm HDPE pipe(10kg)						
		1	9057.000				9057.000
	Total						**9057.000**
						Total Quantity in metre	**9057.000**
1.009	100.98.194						
	Supply of HDPE Pipe PE 100 (IS 4984/1995), 16kg, 90mm Outer Dia.						
	90mm HDPE 16kg						
	90mm HDPE 16kg	1	24740.000			1.000000	24740.000
	For rider line	1	3000.000			1.000000	3000.000
	Total						**27740.000**

Sl No	Specification	No	Length	Width	Depth	Cf	Quantity
						Total Quantity in metre	**27740.000**
1.010	OD100204/2022-2023						
	Specials for 90mm HDPE Pipe (16kg) (3% Cost of pipe)						
	Specials for 90mm HDPE Pipe (16kg)						
		1	27740.000				27740.000
	Total						**27740.000**
						Total Quantity in metre	**27740.000**
1.011	100.98.135						
	Supply of HDPE Pipe PE 100 (IS 4984/1995), 8kg, 110mm Outer Dia.						
	110mm HDPE 8kg						
		1	622.000				622.000
	Total						**622.000**
						Total Quantity in metre	**622.000**
1.012	OD99923/2022-2023						
	110 mm HDPE specials (8kg) (3% Cost of pipe)						
	110 mm HDPE specials (8kg)						
		1	622.000				622.000
	Total						**622.000**
						Total Quantity in metre	**622.000**
1.013	100.98.155						
	Supply of HDPE Pipe PE 100 (IS 4984/1995), 10kg, 110mm Outer Dia.						
	110mm HDPE 10kg						
		1	898.000				898.000
	Total						**898.000**
						Total Quantity in metre	**898.000**
1.014	OD100178/2022-2023						
	110mm HDPE specials (10kg) (3% Cost of pipe)						
	110mm HDPE specials (10kg)						
		1	898.000				898.000
	Total						**898.000**
						Total Quantity in metre	**898.000**
1.015	100.98.195						
	Supply of HDPE Pipe PE 100 (IS 4984/1995), 16kg, 110mm Outer Dia.						
	110mm HDPE 16kg						

Sl No	Specification	No	Length	Width	Depth	Cf	Quantity
		1	2201.000				2201.000
	Total						**2201.000**
						Total Quantity in metre	**2201.000**
1.016	OD100207/2022-2023						
	Specials for 110mm HDPE 16kg						
	Specials for 110mm HDPE 16kg						
		1	2201.000				2201.000
	Total						**2201.000**
						Total Quantity in metre	**2201.000**
1.017	100.98.436						
	Supply of CI Air Valve, Conforming to IS 14848 - 2000, Kinetic Air Valve Type DK, Size 80mm.						
	80 mm CI air valve						
		3					3.000
	Total						**3.000**
						Total Quantity in no	**3.000**
1.018	100.98.444						
	Supply of CI Air Valve, Conforming to IS 14848 - 2000, Single Orifice, Large Orifice Type S2, Size 50mm.						
	50 mm CI air valve						
		1					1.000
	Total						**1.000**
						Total Quantity in no	**1.000**
1.019	100.98.445						
	Supply of CI Air Valve, Conforming to IS 14848 - 2000, Double Orifice Type DS2, Size 40mm.						
	40 mm CI air valve						
		9					9.000
	Total						**9.000**
						Total Quantity in no	**9.000**
1.020	100.98.440						
	Supply of CI Air Valve, Conforming to IS 14848 - 2000, Single Orifice, Small Orifice Type S1, Size 25mm.						
	25 mm CI air valve						
		58					58.000
	Total						**58.000**
						Total Quantity in no	**58.000**
1.021	100.98.475						

Sl No	Specification	No	Length	Width	Depth	Cf	Quantity
	Supply of CI Double Flanged Sluice Valve Conforming to IS 14846 - 2000, Sluice Valve with Cap PN 1.0, Size 300mm.						
	300 mm sluice valve						
		1					1.000
	Total						**1.000**
						Total Quantity in no	**1.000**
1.022	100.98.474						
	Supply of CI Double Flanged Sluice Valve Conforming to IS 14846 - 2000, Sluice Valve with Cap PN 1.0, Size 250mm.						
	250 mm sluice valve						
		1					1.000
	Total						**1.000**
						Total Quantity in no	**1.000**
1.023	100.98.473						
	Supply of CI Double Flanged Sluice Valve Conforming to IS 14846 - 2000, Sluice Valve with Cap PN 1.0, Size 200mm.						
	200 mm Sluice valve						
		1					1.000
	Total						**1.000**
						Total Quantity in no	**1.000**
1.024	100.98.472						
	Supply of CI Double Flanged Sluice Valve Conforming to IS 14846 - 2000, Sluice Valve with Cap PN 1.0, Size 150mm.						
	150 mm sluice valve						
		1					1.000
	Total						**1.000**
						Total Quantity in no	**1.000**
1.025	100.98.469						
	Supply of CI Double Flanged Sluice Valve Conforming to IS 14846 - 2000, Sluice Valve with Cap PN 1.0, Size 80mm.						
	80mm Sluice valve						
		28					28.000
	Total						**28.000**
						Total Quantity in no	**28.000**
2	Supplying , Laying and commissioning of Distribution- Working charges						
2.001	100.1.1						

Sl No	Specification	No	Length	Width	Depth	Cf	Quantity
	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.						
	Excavating trenches- All kinds of soil						
	300 mm DI K9	1	1504.000	1.000	1.250	0.750000	1410.000
	250 mm DI K9	1	2519.000	0.900	1.200	0.750000	2040.390
	200 mm DI K9	1	3293.000	0.800	1.150	0.750000	2272.170
	150 mm DI K9	1	1474.000	0.600	1.100	0.750000	729.630
	110mm HDPE	1	3721.000	0.600	1.100	0.750000	1841.895
	90mm HDPE	1	39263.000	0.500	1.000	0.750000	14723.625
	90mm HDPE Rider line	1	3000.000	0.500	1.000	0.750000	1125.000
	Deduction for ms pipe 300mm	-1	20.000	1.000	1.250	0.750000	-18.750
	Deduction for ms pipe 250mm	-1	25.000	0.900	1.200	0.750000	-20.250
	Deduction for ms pipe 200mm	-1	33.000	0.800	1.150	0.750000	-22.770
	Deduction for ms pipe 150mm	-1	15.000	0.600	1.100	0.750000	-7.425
	Dismantling of flexible pavement	-1	5400.000	0.600	0.300		-972.000
	Demolishing cement concrete	-1	4500.000	0.600	0.150		-405.000
	Total						**22696.515**
						Total Quantity in cum	**22696.515**
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.						
	Excavating trenches- Ordinary rock						

Sl No	Specification	No	Length	Width	Depth	Cf	Quantity
	300 mm DI K9	1	1504.000	1.000	1.250	0.150000	282.000
	250 mm DI K9	1	2519.000	0.900	1.200	0.150000	408.078
	200 mm DI K9	1	3293.000	0.800	1.150	0.150000	454.434
	150 mm DI K9	1	1474.000	0.600	1.100	0.150000	145.926
	110mm HDPE	1	3721.000	0.600	1.100	0.150000	368.379
	90mm HDPE	1	39263.000	0.500	1.000	0.150000	2944.725
	90mm HDPE Rider line	1	3000.000	0.500	1.000	0.150000	225.000
	Deduction for ms pipe 300mm	-1	20.000	1.000	1.250	0.150000	-3.750
	Deduction for ms pipe 250mm	-1	25.000	0.900	1.200	0.150000	-4.050
	Deduction for ms pipe 200mm	-1	33.000	0.800	1.150	0.150000	-4.554
	Deduction for ms pipe 150mm	-1	15.000	0.600	1.100	0.150000	-1.485
	Total						**4814.703**
						Total Quantity in cum	**4814.703**
2.003	100.2.3						
	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 Requiring Blasting.						
	Excavating trenches- Medium rock						
	300 mm DI K9	1	1504.000	1.000	1.250	0.050000	94.000
	250 mm DI K9	1	2519.000	0.900	1.200	0.050000	136.026
	200 mm DI K9	1	3293.000	0.800	1.150	0.050000	151.478
	150 mm DI K9	1	1474.000	0.600	1.100	0.050000	48.642
	110mm HDPE	1	3721.000	0.600	1.100	0.050000	122.793
	90mm HDPE	1	39263.000	0.500	1.000	0.050000	981.575

Sl No	Specification	No	Length	Width	Depth	Cf	Quantity
	90mm HDPE Rider line	1	3000.000	0.500	1.000	0.050000	75.000
	Deduction for ms pipe 300mm	-1	20.000	1.000	1.250	0.050000	-1.250
	Deduction for ms pipe 250mm	-1	25.000	0.900	1.200	0.050000	-1.350
	Deduction for ms pipe 200mm	-1	33.000	0.800	1.150	0.050000	-1.518
	Deduction for ms pipe 150mm	-1	15.000	0.600	1.100	0.050000	-0.495
	Total						**1604.901**
						Total Quantity in cum	**1604.901**
2.004	100.1.13						
	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 Hard Rock where Blasting is Prohibited.						
	Excavation						
	300 mm DI K9	1	1504.000	1.000	1.250	0.050000	94.000
	250 mm DI K9	1	2519.000	0.900	1.200	0.050000	136.026
	200 mm DI K9	1	3293.000	0.800	1.150	0.050000	151.478
	150 mm DI K9	1	1474.000	0.600	1.100	0.050000	48.642
	110mm HDPE	1	3721.000	0.600	1.100	0.050000	122.793
	90mm HDPE	1	39263.000	0.500	1.000	0.050000	981.575
	90mm HDPE Rider line	1	3000.000	0.500	1.000	0.050000	75.000
	Deduction for ms pipe 300mm	-1	20.000	1.000	1.250	0.050000	-1.250
	Deduction for ms pipe 250mm	-1	25.000	0.900	1.200	0.050000	-1.350
	Deduction for ms pipe 200mm	-1	33.000	0.800	1.150	0.050000	-1.518
	Deduction for ms pipe 150mm	-1	15.000	0.600	1.100	0.050000	-0.495
	Total						**1604.901**
						Total Quantity in cum	**1604.901**

Sl No	Specification	No	Length	Width	Depth	Cf	Quantity
2.005	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 for trenches						
		1	50000.000				50000.000
	Total						**50000.000**
						Total Quantity in metre	**50000.000**
2.006	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						
		2	1200.000				2400.000
	Total						**2400.000**
						Total Quantity in metre	**2400.000**
2.007	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						
		1	5400.000	0.600	0.300		972.000
	Total						**972.000**
						Total Quantity in cum	**972.000**
2.008	15.2.2						
	Demolishing cement concrete manually / by mechanical means including disposal of material within 50 metres lead as per direction of Engineer - in-Charge.Nominal concrete 1:4:8 leaner mix (including equivalent design mix)						
	Demolishing cement concrete						
		1	4500.000	0.600	0.150		405.000
	Total						**405.000**
						Total Quantity in cum	**405.000**
2.009	18.12.8						
	Providing and fixing G.I. pipes complete with G.I fittings including trenching and refilling etc. External work80 mm dia nominal bore						

Sl No	Specification	No	Length	Width	Depth	Cf	Quantity
	Providing and fixing 80 mm GI						
		1	13467.000				13467.000
	Total						**13467.000**
						Total Quantity in metre	**13467.000**
2.010	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 90mm HDPE						
		1	39263.000				39263.000
	Total						**39263.000**
						Total Quantity in metre	**39263.000**
2.011	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.						
	Laying 110mm HDPE						
		1	3721.000				3721.000
	Total						**3721.000**
						Total Quantity in metre	**3721.000**
2.012	100.14.5						
	Conveying and laying S&S Centrifugally Cast (Spun) / Ductile Iron Pipes conforming to IS: 8329 excluding cost of pipes and specials: 300mm diameter Ductile Iron Class K-9 Pipes.						
	Conveying and laying 300 mm DI						
		1	1524.000				1524.000
	Total						**1524.000**

Sl No	Specification	No	Length	Width	Depth	Cf	Quantity
						Total Quantity in metre	**1524.000**
2.013	18.70.5						
	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:300 mm dia pipe						
	Push on Joints						
		280					280.000
	Total						**280.000**
						Total Quantity in joint	**280.000**
2.014	18.30.7						
	Providing flanged joints to double flanged C.I./ D.I pipes and specials, including testing of joints:300 mm diameter pipe						
	Flanged joints						
		4					4.000
	Total						**4.000**
						Total Quantity in no	**4.000**
2.015	OD113332/2022-2023						
	Labour for cutting DI pipe with steel saw 300 mm diameter of DI Pipe						
	Labour for cutting						
		40					40.000
	Total						**40.000**
						Total Quantity in Each Cut	**40.000**
2.016	100.35.5						
	Testing 300mm DI/CI pipeline with potable water to the required test pressure. 300 mm dia Observed Data derived from item no.1023 of PHED DATA						
	Testing 300mm pipe						
		1	1524.000				1524.000
	Total						**1524.000**
						Total Quantity in metre	**1524.000**
2.017	100.14.4						
	Conveying and laying S&S Centrifugally Cast (Spun) / Ductile Iron Pipes conforming to IS: 8329 excluding cost of pipes and specials: 250mm diameter Ductile Iron Class K-9 Pipes.						
	Conveying and laying 250 mm DI						
		1	2544.000				2544.000
	Total						**2544.000**
						Total Quantity in metre	**2544.000**
2.018	18.70.4						

Sl No	Specification	No	Length	Width	Depth	Cf	Quantity
	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:250 mm dia pipes						
	Providing push- on -joints						
		465					465.000
	Total						**465.000**
						Total Quantity in joint	**465.000**
2.019	18.30.6						
	Providing flanged joints to double flanged C.I./ D.I pipes and specials, including testing of joints:250 mm diameter pipe						
	Providing flanged joints to double flanged pipes						
		5					5.000
	Total						**5.000**
						Total Quantity in no	**5.000**
2.020	OD113323/2022-2023						
	Labour for cutting DI pipe with steel saw 250 mm diameter of DI Pipe						
	Labour for cutting						
		60					60.000
	Total						**60.000**
						Total Quantity in Each Cut	**60.000**
2.021	100.35.4						
	Testing 250mm DI/CI pipeline with potable water to the required test pressure . 250 mm dia Observed Data derived from item no.1022 of PHED DATA						
	Testing 250 mm DI						
		1	2544.000				2544.000
	Total						**2544.000**
						Total Quantity in metre	**2544.000**
2.022	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 200 mm DI						
		1	3326.000				3326.000
	Total						**3326.000**
						Total Quantity in metre	**3326.000**
2.023	18.70.3						

Sl No	Specification	No	Length	Width	Depth	Cf	Quantity
	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						
		610					610.000
	Total						**610.000**
						Total Quantity in joint	**610.000**
2.024	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 pipes						
		6					6.000
	Total						**6.000**
						Total Quantity in no	**6.000**
2.025	OD113324/2022-2023						
	Labour for cutting DI pipe with steel saw 200 mm diameter of DI Pipe						
	Labour for cutting						
		60					60.000
	Total						**60.000**
						Total Quantity in Each Cut	**60.000**
2.026	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 200 mm DI						
		1	3326.000				3326.000
	Total						**3326.000**
						Total Quantity in metre	**3326.000**
2.027	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 150 mm DI						
		1	1489.000				1489.000
	Total						**1489.000**
						Total Quantity in metre	**1489.000**
2.028	18.70.2						

Sl No	Specification	No	Length	Width	Depth	Cf	Quantity
	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						
		275					275.000
	Total						**275.000**
						Total Quantity in joint	**275.000**
2.029	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 pipes						
		3					3.000
	Total						**3.000**
						Total Quantity in no	**3.000**
2.030	OD113325/2022-2023						
	Labour for cutting DI pipe with steel saw 150 mm diameter of DI Pipe						
	Labour for cutting						
		15					15.000
	Total						**15.000**
						Total Quantity in Each Cut	**15.000**
2.031	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 150 mm DI						
		1	1489.000				1489.000
	Total						**1489.000**
						Total Quantity in metre	**1489.000**
2.032	18.69.1						
	Providing and laying D.I Specials of Class K - 12 suitable for mechanical jointing as per IS : 9523 :Upto 600 mm dia						
	Providing and laying MJ collar						
	300 mm DI K9	3				0.480000	1.440
	250 mm DI K9	5				0.360000	1.800
	200 mm DI K9	7				0.270000	1.890
	150 mm DI K9	3				0.200000	0.600

Sl No	Specification	No	Length	Width	Depth	Cf	Quantity
	Total						**5.730**
						Total Quantity in quintal	**5.730**
2.033	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						
	DI Specials						
	300 mm 90 degree	4				0.680000	2.720
	300 mm 45 degree	8				0.500000	4.000
	300 mm 22.5 degree	10				0.440000	4.400
	300 mm 11.25 degree	15				0.400000	6.000
	250 mm 90 degree	4				0.480000	1.920
	250 mm 45 degree	12				0.360000	4.320
	250 mm 22.5 degree	15				0.320000	4.800
	250 mm 11.25 degree	15				0.300000	4.500
	200 mm 90 degree	4				0.320000	1.280
	200 mm 45 degree	15				0.260000	3.900
	200 mm 22.5 degree	21				0.230000	4.830
	200 mm 11.5 degree	32				0.210000	6.720
	150 mm 90 degree	4				0.200000	0.800
	150 mm 45 degree	7				0.160000	1.120
	150 mm 22.5 degree	17				0.150000	2.550
	150 mm 11.25 degree	24				0.140000	3.360
	300x250 Tee	5				1.030000	5.150
	300x200 Tee	7				0.950000	6.650
	300x150 Tee	8				0.900000	7.200

Sl No	Specification	No	Length	Width	Depth	Cf	Quantity
	300X80 Tee	11				0.890000	9.790
	250x200	5				0.710000	3.550
	250x150 Tee	8				0.690000	5.520
	250X80 Tee	10				0.640000	6.400
	150x80 Tee	40				0.290000	11.600
	300 TP	2				0.430000	0.860
	250 TP	2				0.320000	0.640
	200 TP	2				0.230000	0.460
	150 TP	2				0.160000	0.320
	Total						**115.360**
						Total Quantity in quintal	**115.360**
2.034	100.32.4						
	Conveying and fixing C. I. Double 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): 80mm Double Acting Air Valve.						
	80 mm CI air valve						
		3					3.000
	Total						**3.000**
						Total Quantity in no	**3.000**
2.035	100.32.3						
	Conveying and fixing C. I. Double 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): 50mm Double Acting Air Valve.						
	50 mm CI air valve						
		1					1.000
	Total						**1.000**
						Total Quantity in no	**1.000**
2.036	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.						
	40 mm CI air valve						
		9					9.000

Sl No	Specification	No	Length	Width	Depth	Cf	Quantity
	Total						**9.000**
						Total Quantity in no	**9.000**
2.037	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.						
	25 mm CI air valve						
		58					58.000
	Total						**58.000**
						Total Quantity in no	**58.000**
2.038	100.31.1.7						
	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): 300mm diameter, Class I.						
	Conveying and fixing Sluice valve 300mm						
		1					1.000
	Total						**1.000**
						Total Quantity in no	**1.000**
2.039	100.31.1.6						
	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): 250mm diameter, Class I.						
	250 mm sluice valve						
		1					1.000
	Total						**1.000**
						Total Quantity in no	**1.000**
2.040	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.						
	200 mm Sluice valve						
		1					1.000
	Total						**1.000**
						Total Quantity in no	**1.000**
2.041	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.						
	150 mm sluice valve						
		1					1.000

Sl No	Specification	No	Length	Width	Depth	Cf	Quantity
	Total						**1.000**
						Total Quantity in no	**1.000**
2.042	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.						
	80 mm sluice valve						
		28					28.000
	Total						**28.000**
						Total Quantity in no	**28.000**
2.043	100.37.9.1						
	In situ fabrication of M.S. pipes of size 300mm (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.						
	300 mm MS pipe						
	MS pipe	1	20.000				20.000
	Total						**20.000**
						Total Quantity in metre	**20.000**
2.044	100.37.9.2						
	Fabricating M.S. flanges of diameter 300mm 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.						
	Flanges						
		8					8.000
	Total						**8.000**
						Total Quantity in no	**8.000**
2.045	100.37.9.3						
	Cutting 300mm (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						
		10					10.000
	Total						**10.000**
						Total Quantity in no	**10.000**
2.046	100.37.9.4						

Sl No	Specification	No	Length	Width	Depth	Cf	Quantity
	Welding 300mm (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						
		10					10.000
	Total						**10.000**
						Total Quantity in no	**10.000**
2.047	100.37.9.5						
	Grinding cut and weld edges of 300mm (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						
		20					20.000
	Total						**20.000**
						Total Quantity in no	**20.000**
2.048	100.37.8.1						
	In situ fabrication of M.S. pipes of size 250mm (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.						
	MS pipe 250mm						
		1	25.000				25.000
	Total						**25.000**
						Total Quantity in metre	**25.000**
2.049	100.37.8.2						
	Fabricating M.S. flanges of diameter 250mm 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.						
	MS flange						
		10					10.000
	Total						**10.000**
						Total Quantity in no	**10.000**
2.050	100.37.8.3						
	Cutting 250mm (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						
		12					12.000
	Total						**12.000**

Sl No	Specification	No	Length	Width	Depth	Cf	Quantity
						Total Quantity in no	**12.000**
2.051	100.37.8.4						
	Welding 250mm (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						
		12					12.000
	Total						**12.000**
						Total Quantity in no	**12.000**
2.052	100.37.8.5						
	Grinding cut and weld edges of 250mm (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						
		24					24.000
	Total						**24.000**
						Total Quantity in no	**24.000**
2.053	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.						
	MS pipe 200 mm						
		1	33.000				33.000
	Total						**33.000**
						Total Quantity in metre	**33.000**
2.054	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.						
	MS flange						
		12					12.000
	Total						**12.000**
						Total Quantity in no	**12.000**
2.055	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.						

Sl No	Specification	No	Length	Width	Depth	Cf	Quantity
	Cutting						
		16					16.000
	Total						**16.000**
						Total Quantity in no	**16.000**
2.056	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						
		16					16.000
	Total						**16.000**
						Total Quantity in no	**16.000**
2.057	100.37.7.5						
	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						
		32					32.000
	Total						**32.000**
						Total Quantity in no	**32.000**
2.058	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.						
	MS pipe 150 mm						
		1	15.000				15.000
	Total						**15.000**
						Total Quantity in metre	**15.000**
2.059	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.						
	MS flange						
		6					6.000
	Total						**6.000**
						Total Quantity in no	**6.000**
2.060	100.37.6.3						

Sl No	Specification	No	Length	Width	Depth	Cf	Quantity
	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						
		8					8.000
	Total						**8.000**
						Total Quantity in no	**8.000**
2.061	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						
		8					8.000
	Total						**8.000**
						Total Quantity in no	**8.000**
2.062	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.						
	Grinding						
		16					16.000
	Total						**16.000**
						Total Quantity in no	**16.000**
2.063	2.6.1						
	Earth work in excavation by mechanical means (Hydraulic excavator)/manual means over areas (exceeding 30 cm in depth, 1.5 m in width as well as 10 sqm on plan) including disposal of excavated earth, lead up to 50 m and lift up to 1.5 m, disposed earth to be levelled and neatly dressed.All kinds of soil						
	Excavation						
	valve Chamber Size 1x1x1	25	1.600	1.600	1.500		96.000
	Total						**96.000**
						Total Quantity in cum	**96.000**
2.064	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)						
	PCC and Anchor Block						
	valve Chamber Size 1x1x1	25	1.600	1.600	0.100		6.400
	Anchor Block	90	0.800	0.800	0.800		46.080

Sl No	Specification	No	Length	Width	Depth	Cf	Quantity
	Anchor Block	120	0.400	0.400	0.400		7.680
	Total						**60.160**
						Total Quantity in cum	**60.160**
2.065	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						
	RCC 1:1.5:3						
	Base slab 1X1X1	25	1.500	1.500	0.150		8.438
	Long wall 1X1X1	25	3.000	0.250	1.000		18.750
	short wall 1X1X1	25	2.000	0.250	1.000		12.500
	slab 1X1X1	25	1.500	1.500	0.250		14.063
	Total						**53.751**
						Total Quantity in cum	**53.751**
2.066	5.9.2						
	Centering and shuttering including strutting, etc. and removal of form for:Walls (any thickness) including attached pilasters, butteresses, plinth and string courses etc.						
	Centering and shuttering						
	Side wall Outer 1x1x1	25	1.5*4		1.000		150.000
	Side wall Inner 1x1x1	25	1*4		1.000		100.000
	Total						**250.000**
						Total Quantity in sqm	**250.000**
2.067	5.9.1						
	Centering and shuttering including strutting, etc. and removal of form for:Foundations, footings, bases of columns, etc for mass concrete						
	Centering and shuttering						
	Anchor block	90	0.8*4		0.800		230.400
	Anchor block	120	0.4*4		0.400		76.800
	Cover slab side wall 1x1x1	25	1.5*4		0.250		37.500
	Total						**344.700**
						Total Quantity in sqm	**344.700**
2.068	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						

Sl No	Specification	No	Length	Width	Depth	Cf	Quantity
	Reinforcement						
	For valve chamber	54				60.000000	3240.000
	Total						**3240.000**
						Total Quantity in kilogram	**3240.000**
2.069	16.83						
	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.						
	Taking out Interlock						
		1	1000.000	0.900			900.000
	Total						**900.000**
						Total Quantity in sqm	**900.000**
2.070	16.84						
	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 Old Inter lock						
		1	1000.000	0.900		0.800000	720.000
	Total						**720.000**
						Total Quantity in sqm	**720.000**
2.071	16.68						
	Providing and laying 60 mm thick factory made cement concrete interlocking paver block of M - 30 grade made by block making machine with strong vibratory compaction, of approved size, design & shape, laid in required 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.						
	Laying New Inter lock						
		1	1000.000	0.900		0.200000	180.000
	Total						**180.000**
						Total Quantity in sqm	**180.000**
3	Providing FHTCs						
3.001	100.60.13.4.2						

Sl No	Specification	No	Length	Width	Depth	Cf	Quantity
	Providing 15mm (1/2 inch) house connection with 15mm water meter from existing AC / GI mains up to 125 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, GI / MS 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.						
	Upto 125mm GI(80mm)						
	80 mm GI	224					224.000
	Total						**224.000**
						Total Quantity in no	**224.000**
3.002	100.60.13.6.2						
	Providing 20mm (3/4 inch) house connection with 15mm water meter from existing AC / GI 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, GI / MS 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.						
	Upto 125mm GI(80mm)						
		336					336.000
	Total						**336.000**
						Total Quantity in no	**336.000**
3.003	100.60.13.1.2						

Sl No	Specification	No	Length	Width	Depth	Cf	Quantity
	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.						
	Upto 110mm HDPE(90mm,110mm)						
		782					782.000
	Total						**782.000**
						Total Quantity in no	**782.000**
3.004	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.						
	Upto 110mm HDPE(90mm,110mm)						
		1174					1174.000
	Total						**1174.000**
						Total Quantity in no	**1174.000**
3.005	100.60.14.7.2						

Sl No	Specification	No	Length	Width	Depth	Cf	Quantity
	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.						
	CI mains from 150mm to 200mm DI						
	CI mains	80					80.000
	Total						**80.000**
						Total Quantity in no	**80.000**
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.						
	CI mains from 150mm to 200mm DI						
	CI mains	118					118.000
	Total						**118.000**
						Total Quantity in no	**118.000**
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.						
	20mm Air valve						
		1086					1086.000
	Total						**1086.000**

Sl No	Specification	No	Length	Width	Depth	Cf	Quantity
						Total Quantity in no	**1086.000**
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.						
	25mm Air valve						
		1628					1628.000
	Total						**1628.000**
						Total Quantity in no	**1628.000**
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.						
	20 mm PVC Tap						
		1086					1086.000
	Total						**1086.000**
						Total Quantity in no	**1086.000**
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.						
	25 mm PVC Tap						
		1628					1628.000
	Total						**1628.000**
						Total Quantity in no	**1628.000**
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.						
	Additional Length 20mm						

Sl No	Specification	No	Length	Width	Depth	Cf	Quantity
	Additional Length 20mm Pipe (24m/Connection)	1086	24.000				26064.000
	Total						**26064.000**
						Total Quantity in metre	**26064.000**
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.						
	Additional Length 25 mm Pipe						
	Additional Length 25mm Pipe (48m/Connection)	1628	48.000				78144.000
	Total						**78144.000**
						Total Quantity in metre	**78144.000**
3.013	15.2.1						
	Demolishing cement concrete manually / by mechanical means including disposal of material within 50 metres lead as per direction of Engineer - in-Charge.Nominal concrete 1:3:6 or richer mix (i/c equivalent design mix)						
	Demolishing cement concrete						
		1	2500.000	0.300	0.150		112.500
	Total						**112.500**
						Total Quantity in cum	**112.500**
3.014	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 for a minimum depth of						

Sl No	Specification	No	Length	Width	Depth	Cf	Quantity
	200mm						
		2	3000.000				6000.000
	Total						**6000.000**
						Total Quantity in metre	**6000.000**
3.015	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 manually / by mechanical						
		1	6000.000	0.600	0.200		720.000
	Total						**720.000**
						Total Quantity in cum	**720.000**
4	Road restoration charges PWD/SH/NH						
4.001	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						
	Excavation						
	Berm PWD	1	15000.000	0.500	0.200		1500.000
	Berm SH/NH	1	11000.000	0.500	0.200		1100.000
	CC Pavement PWD/NH	1	2000.000	0.600	0.350		420.000
	Tar cut PWD	1	1400.000	0.600	0.500		420.000
	Bitumen Cutting SH/NH	1	1000.000	0.600	0.500		300.000
	Interlock	1	1000.000	0.900	0.200		180.000
	Total						**3920.000**
						Total Quantity in cum	**3920.000**
4.002	4.2.A.1						
	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-III -For lower sub-base - Mix in Place Method						
	GSB						
	Berm PWD	1	15000.000	0.500	0.200		1500.000
	Berm SH/NH	1	11000.000	0.500	0.200		1100.000

Sl No	Specification	No	Length	Width	Depth	Cf	Quantity
	CC Pavement PWD/NH	1	2000.000	0.600	0.150		180.000
	Tar cut PWD	1	1400.000	0.600	0.200		168.000
	Bitumen Cutting SH/NH	1	1000.000	0.600	0.200		120.000
	Interlock	1	1000.000	0.900	0.200		180.000
	Total						**3248.000**
						Total Quantity in cum	**3248.000**
4.003	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 CUT PWD	1	1400.000	0.600	0.200		168.000
	BITUMEN CUTTING SH	1	1000.000	0.600	0.200		120.000
	Total						**288.000**
						Total Quantity in cum	**288.000**
4.004	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.						
	Primer coat						
	TAR CUT PWD	1	1400.000	1.000			1400.000
	BITUMEN CUTTING SH	1	1000.000	1.500			1500.000
	Total						**2900.000**
						Total Quantity in sqm	**2900.000**
4.005	5.2.b						
	Providing and applying tack coat with bitumen emulsion (RS) using emulsion pressure distributor at the rate of 0.25 - 0.30 kg per sqm on the prepared Granular Surface cleaned with mechanical broom.						
	Tack coat						
	Tar PWD	1	1400.000	1.000			1400.000
	SHTC cut	1	1000.000	1.500			1500.000
	Total						**2900.000**
						Total Quantity in sqm	**2900.000**
4.006	5.3.2.a						

Sl No	Specification	No	Length	Width	Depth	Cf	Quantity
	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)						
	BM						
	BM	1	1000.000	1.500	0.050		75.000
	Total						**75.000**
						Total Quantity in cum	**75.000**
4.007	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.						
	Tack coat						
	BITUMEN CUTTING SH	1	1000.000	1.500			1500.000
	Total						**1500.000**
						Total Quantity in sqm	**1500.000**
4.008	5.6.2.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) @ 5.4 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 - II (13.2 mm Nominal Size)						
	BC						
	BC	1	1000.000	1.500	0.030		45.000
	Total						**45.000**
						Total Quantity in cum	**45.000**
4.009	5.7.1						
	Providing, laying and rolling of close-graded premix surfacing material of 20 mm thickness composed of 11.2 mm to 0.09 mm (Type-A) aggregates using viscosity grade bitumen (VG - 30) to the required line, grade, and level to serve as wearing course on a previously prepared base, including mixing in a suitable HMP of appropriate capacity not less than 75 tonnes/hour., laying and rolling with a Smooth wheeled roller 8-10 tonne capacity, and finishing to the required level and grade.						
	Close graded premix						
	TAR CUT PWD	1	1400.000	1.000			1400.000
	Total						**1400.000**
						Total Quantity in sqm	**1400.000**

Sl No	Specification	No	Length	Width	Depth	Cf	Quantity
4.010	5.8.a						
	Providing and laying surface dressing as wearing course in single coat using crushed stone aggregates of specified size on a layer of bituminous binder (VG 30) laid on the prepared surface and rolling with 8-10 tonne smooth wheeled steel roller. Grading I - 19 mm nominal chipping size						
	Seal coat						
	TAR CUT PWD	1	1400.000	1.000			1400.000
	Total						**1400.000**
						Total Quantity in sqm	**1400.000**
4.011	12.4						
	Plain cement concrete 1:3:6 nominal mix in foundation with crushed stone aggregate 40 mm nominal size mechanically mixed, placed in foundation and compacted by vibration including curing for 14 days.						
	CC 40mm						
	CC SHOULDER PWD/SH	1	2000.000	0.500	0.100		100.000
	Total						**100.000**
						Total Quantity in cum	**100.000**
4.012	12.8.B.1						
	Plain/Reinforced Cement Concrete in Open Foundation complete as per Drawing and Technical Specifications PCC Grade M20 						
	Wearing Coat						
	CC SHOULDER PWD/SH	1	2000.000	0.500	0.050		50.000
	Total						**50.000**
						Total Quantity in cum	**50.000**
5	Road restoration charges LSGD						
5.001	3.5.3						
	Excavation in Soil using Hydraulic Excavator and Tippers with disposal upto 1000 m 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 with a lift upto 1.5 m and lead upto 1000 m as per Technical Specification Clause 302.3						
	Excavation						
	Tar Road	1	3000.000	0.600	0.400		720.000
	For Concrete Road	1	2500.000	0.600	0.350		525.000
	Total						**1245.000**
						Total Quantity in cum	**1245.000**
5.002	4.1.A.1						

Sl No	Specification	No	Length	Width	Depth	Cf	Quantity
	Granular Sub-base with Well Graded Material (Table 400.1) (A) By Mix in Place Method Construction of granular sub-base by providing well graded material, spreading in uniform layers with motor grader on prepared surface, mixing by mix in place method with rotavator at OMC, and compacting with smooth wheel roller to achieve the desired density, complete as per Technical Specification Clause 401. (i) For Grading I Material						
	GSB						
	Tar Road	1	3000.000	0.600	0.200		360.000
	For Concrete Road	1	2500.000	0.600	0.200		300.000
	Total						**660.000**
						Total Quantity in cum	**660.000**
5.003	4.9						
	Wet Mix Macadam Providing, laying, spreading and compacting graded stone aggregate to wet mix macadam specification including premixing the material with water at OMC in mechanical mixer (Pug Mill), carriage of mixed material by tipper to site, laying in uniform layers in sub-base/base course on a well prepared sub-base and compacting with smooth wheel roller of 80 to 100kN weight to achieve the desired density including lighting, barricading and maintenance of diversion, etc as per Tables 400.11 & 400.12 and Technical Specification Clause 406. By Mechanical Means with 1 km lead						
	WMM						
	For tar Road	1	3000.000	0.600	0.200		360.000
	Total						**360.000**
						Total Quantity in cum	**360.000**
5.004	5.1.1a						
	Prime Coat :- Low porosity Providing and applying primer coat with bitumen emulsion (SS-1) on prepared surface of granular base including cleaning of road surface and spraying primer at the rate of 0.70-1.0 kg/sqm using mechanical means as per Technical Specification Clause 502						
	prime coat						
	For tar Road	1	3000.000	1.000			3000.000
	Total						**3000.000**
						Total Quantity in sqm	**3000.000**
5.005	5.2.3a						
	Tack Coat Providing and applying tack coat with Bitumen emulsion (RS-1) using emulsion distributor at the rate of 0.25 to 0.30 kg per sqm on the prepared granular surfaces treated with primer & cleaned with Hydraulic broom as per Technical Specification Clause 503.						
	For tar road						
		1	3000.000	1.000			3000.000
	Total						**3000.000**

Sl No	Specification	No	Length	Width	Depth	Cf	Quantity
						Total Quantity in sqm	**3000.000**
5.006	5.9.1.2a						
	20mm thick Open-Graded Premix Carpet using Bituminous (penetration grade/modified bitumen) Binder - Bitumen S-65 Providing, laying and rolling of open-graded premix carpet of 20 mm thickness composed of 13.2 mm to 5.6 mm aggregates either using penetration grade bitumen or emulsion to required line, grade and level to serve as wearing course on a previously prepared base, including mixing in a suitable plant, laying and rolling with a three wheel 80-100 kN static roller capacity, finished to required level and grades to be followed by seal coat of either Type A or Type B or Type C as per Technical Specification Clause 508. Case - I By Manual Means (II) Bitumen (S-65)						
	OGPC						
		1	3000.000	1.000			3000.000
	Total						**3000.000**
						Total Quantity in sqm	**3000.000**
5.007	5.12.A.3.2a						
	Seal Coat - Manual Means - Type C - Bitumen S-65 Providing and laying seal coat sealing the voids in a bituminous surface laid to the specified levels, grade and cross fall using Type A, Type B and Type C as per Technical Specification Clause 510 A. By Manual Means :- Case - III : Type C (II) Bitumen (S-65)						
	Seal coat						
	For tar road	1	3000.000	1.000			3000.000
	Total						**3000.000**
						Total Quantity in sqm	**3000.000**
5.008	11.4.3.1						
	Providing concrete for plain/reinforced concrete in open foundations complete as per drawings and technical specifications Clause 802, 803, 1202 & 1203 III. P.C.C. grade M 20 (i) Nominal mix (1:2:4)						
	cement concrete						
	for concrete Road	1	2500.000	0.600	0.150		225.000
	Total						**225.000**
						Total Quantity in cum	**225.000**