ABSTRACT ESTIMATE

Jal Jeevan Mission (JJM)-JJM PROVIDING FHTCS TO ALL HOUSEHOLD IN ERATTAYAR AND KAMAKSHI (PART) PANCHAYATHS IN IDUKKI DISTRICTS-Providing and Laying Distribution Network and FHTC's for various zones-Pipeline Work

Sl No	Specification	Quantity	Rate	Amount
1	**Cost of materials**			
1.001	100.98.116			
	Supply of DI K9 Pipe Conforming to IS 8329/2000, 150mm Dia.			
	Net Total	4714.000metre	@1890.46/metre	8911628.44
1.002	100.98.117			
	Supply of DI K9 Pipe Conforming to IS 8329/2000, 200mm Dia.			
	Net Total	1083.000metre	@2589.09/metre	2803984.47
1.003	100.98.118			
	Supply of DI K9 Pipe Conforming to IS 8329/2000, 250mm Dia.			
	Net Total	631.000metre	@3616.52/metre	2282024.12
1.004	100.98.135			
	Supply of HDPE Pipe PE 100 (IS 4984/1995), 8kg, 110mm Outer Dia.			
	Net Total	27111.000metre	@316.40/metre	8577920.40
1.005	OD79784/2022-2023			
	Supply of specials for HDPE Pipe PE100 ,8(kg) as per direction.			
	Net Total	27111.000metre	@9.50/metre	257554.50
1.006	100.98.155			
	Supply of HDPE Pipe PE 100 (IS 4984/1995), 10kg, 110mm Outer Dia.			
	Net Total	10128.000metre	@385.56/metre	3904951.68
1.007	OD79826/2022-2023			
	Supply of Specials for HDPE Pipe 10(kg) as per direction			
	Net Total	10128.000metre	@11.45/metre	115965.60
1.008	100.98.195			
	Supply of HDPE Pipe PE 100 (IS 4984/1995), 16kg, 110mm Outer Dia.			
	Net Total	27975.000metre	@557.74/metre	15602776.50

Sl No	Specification	Quantity	Rate	Amount
1.009	OD79869/2022-2023			
	Supply of Specials for 110 mm dia HDPE 16(kg) pipe			
	Net Total	27975.000metre	@16.74/metre	468301.50
1.010	100.98.134			
	Supply of HDPE Pipe PE 100 (IS 4984/1995), 8kg, 90mm Outer Dia.			
	Net Total	10205.000metre	@212.57/metre	2169276.85
1.011	OD79888/2022-2023			
	Supply of Specials for 90 mm HDPE 8 Kg Pipe			
	Net Total	10205.000metre	@6.37/metre	65005.85
1.012	100.98.154			
	Supply of HDPE Pipe PE 100 (IS 4984/1995), 10kg, 90mm Outer Dia.			
	Net Total	8100.000metre	@264.59/metre	2143179.00
1.013	OD79908/2022-2023			
	Supply specials for 90 mm HDPE 90 mm 10(kg)pipe			
	Net Total	8100.000metre	@7.95/metre	64395.00
1.014	100.98.194			
	Supply of HDPE Pipe PE 100 (IS 4984/1995), 16kg, 90mm Outer Dia.			
	Net Total	8438.000metre	@376.08/metre	3173363.04
1.015	OD79931/2022-2023			
	Specials for 90 mm HDPE Pipe 16 (kg)			
	Net Total	8438.000metre	@11.30/metre	95349.40
1.016	OD74262/2022-2023			
	Supply of 100mm GI (M) pipes			
	Net Total	360.000metre	@1341.53/metre	482950.80
1.017	OD79681/2022-2023			
	Specials for 100 mm GI pipe medium			
	Net Total	360.000metre	@40.30/metre	14508.00
1.018	100.98.440			
	Supply of CI Air Valve, Conforming to IS 14848 - 2000, Single Orifice, Small Orifice Type S1, Size 25mm.			
	Net Total	265.000no	@5636.76/no	1493741.40
1.019	100.98.445			

Sl No	Specification	Quantity	Rate	Amount
	Supply of CI Air Valve, Conforming to IS 14848 - 2000, Double Orifice Type DS2, Size 40mm.			
	Net Total	50.000no	@6950.42/no	347521.00
1.020	100.98.436			
	Supply of CI Air Valve, Conforming to IS 14848 - 2000, Kinetic Air Valve Type DK, Size 80mm.			
	Net Total	12.000no	@11748.57/no	140982.84
1.021	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	95.000no	@6624.03/no	629282.85
1.022	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	70.000no	@9003.95/no	630276.50
1.023	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	9.000no	@13396.74/no	120570.66
1.024	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	5.000no	@23723.64/no	118618.20
1.025	100.98.462			
	Supply of CI Double Flanged Sluice Valve Conforming to IS 14846 - 2000, Sluice Valve with Cap PN 1.6, Size 250mm.			
	Net Total	3.000no	@34361.82/no	103085.46
			Heading Total(Rs)	54717214.06
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.			
	Net Total	36435.842cum	@579.88/cum	21128416.06
2.002	100.1.5			
	Excavating trenches of required width for pipes, cables, etc., including excavation for			

Sl No	Specification	Quantity	Rate	Amount
	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	14081.478cum	@842.08/cum	11857730.99
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	2816.296cum	@1400.34/cum	3943771.94
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 10m3 of blasting)			
	Net Total	2816.296cum	@4094.08/cum	11530141.13
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	51.632cum	@548.87/cum	28339.26
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	97403.000metre	@28.84/metre	2809102.52
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 mechanical means and carrying out the excavation.			
	Net Total	5250.000metre	@31.77/metre	166792.50
2.008	15.59			

Sl No	Specification	Quantity	Rate	Amount
	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	630.000cum	@394.70/cum	248661.00
2.009	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)			
	Net Total	240.000cum	@1318.13/cum	316351.20
2.010	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	4696.000metre	@91.51/metre	429730.96
2.011	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	845.000joint	@184.10/joint	155564.50
2.012	OD109578/2022-2023			
	Labour for cutting D.I. pipe with steel saw. 150 mm diameter D.I. pipe			
	Net Total	52.000Each Cut	@337.10/Each Cut	17529.20
2.013	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	20.000no	@402.30/no	8046.00
2.014	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	4696.000metre	@32.86/metre	154310.56
2.015	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	1115.000metre	@127.49/metre	142151.35
2.016	18.70.3			

Sl No	Specification	Quantity	Rate	Amount
	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
2.017	OD109584/2022-2023			
	Labour for cutting D.I. pipe with steel saw. 150 mm diameter D.I. pipe			
	Net Total	35.000Each Cut	@337.10/Each Cut	11798.50
2.018	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	15.000no	@436.82/no	6552.30
2.019	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			
	Net Total	1115.000metre	@41.66/metre	46450.90
2.020	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.			
	Net Total	635.000metre	@170.23/metre	108096.05
2.021	18.70.4			
	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			
	Net Total	120.000joint	@329.85/joint	39582.00
2.022	18.30.6			
	Providing flanged joints to double flanged C.I./ D.I pipes and specials, including testing of joints:250 mm diameter pipe			
	Net Total	12.000no	@595.56/no	7146.72
2.023	OD109590/2022-2023			
	Labour for cutting D.I. pipe with steel saw. 250 mm diameter D.I. pipe			
	Net Total	15.000Each Cut	@559.11/Each Cut	8386.65
2.024	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			

Sl No	Specification	Quantity	Rate	Amount
	Net Total	635.000metre	@53.00/metre	33655.00
2.025	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	26743.000metre	@97.37/metre	2603965.91
2.026	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	64938.000metre	@132.06/metre	8575712.28
2.027	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			
	Net Total	40135.000metre	@1064.49/metre	42723306.15
2.028	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	360.000metre	@245.48/metre	88372.80
2.029	18.67.1			
	Providing and laying S & S C.I. Standard specials suitable for mechanical jointing as per IS 13382:Upto 300 mm dia			
	Net Total	5.930quintal	@14708.68/quintal	87222.47
2.030	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	38.700quintal	@21003.05/quintal	812818.04
2.031	100.32.1			

Sl No	Specification	Quantity	Rate	Amount
	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	265.000no	@146.63/no	38856.95
2.032	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	50.000no	@184.44/no	9222.00
2.033	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.			
	Net Total	12.000no	@229.21/no	2750.52
2.034	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	95.000no	@613.80/no	58311.00
2.035	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	70.000no	@925.37/no	64775.90
2.036	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	9.000no	@1253.32/no	11279.88
2.037	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	5.000no	@1625.85/no	8129.25
2.038	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.			
	Net Total	3.000no	@2304.80/no	6914.40
2.039	OD74264/2022-2023			
	Supply and fixing of stainless steel spring loaded pressure relief valve as per IS 9739(1981)			

Sl No	Specification	Quantity	Rate	Amount
	Net Total	30.000no	@6229.37/no	186881.10
2.040	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
2.041	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.			
	Net Total	12.000no	@1544.03/no	18528.36
2.042	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	24.000no	@171.45/no	4114.80
2.043	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	24.000no	@648.09/no	15554.16
2.044	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	48.000no	@121.73/no	5843.04
2.045	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
2.046	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	12.000no	@2081.10/no	24973.20
2.047	100.37.7.3			

Sl No	Specification	Quantity	Rate	Amount
	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	24.000no	@223.11/no	5354.64
2.048	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	24.000no	@843.32/no	20239.68
2.049	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.			
	Net Total	48.000no	@158.40/no	7603.20
2.050	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	466.650cum	@309.99/cum	144656.83
2.051	OD109570/2022-2023			
	Earthwork excavation by mechanical means (Hydrolic excavator)/manual means in foundation trenches or drains (exceeding 1.5 up to 3m.			
	Net Total	93.330cum	@661.68/cum	61754.59
2.052	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	35.258cum	@7527.05/cum	265388.73
2.053	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	79.955cum	@8340.91/cum	666897.46
2.054	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	308.050cum	@9483.13/cum	2921278.20
2.055	5.9.1			

Sl No	Specification	Quantity	Rate	Amount
	Centering and shuttering including strutting, etc. and removal of form for:Foundations, footings, bases of columns, etc for mass concrete			
	Net Total	2559.660sqm	@350.00/sqm	895881.00
2.056	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	20881.650kilogram	@102.61/kilogram	2142666.11
	Heading Total(Rs)			116618962.74
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.			
	Net Total	1322.000no	@7137.54/no	9435827.88
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	1113.000no	@8021.00/no	8927373.00
3.003	100.60.13.7.2			
	Providing 15mm (1/2 inch) house connection with 15mm water meter from existing			

Sl No	Specification	Quantity	Rate	Amount
	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	598.000no	@8321.22/no	4976089.56
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			
	Net Total	922.000no	@9204.69/no	8486724.18
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	121.000no	@8624.50/no	1043564.50
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)			

Sl No	Specification	Quantity	Rate	Amount
	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	152.000no	@9507.98/no	1445212.96
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	2041.000no	@996.49/no	2033836.09
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.			
	Net Total	2187.000no	@1252.94/no	2740179.78
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	2041.000no	@683.67/no	1395370.47
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	2187.000no	@785.68/no	1718282.16
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,			

Sl No	Specification	Quantity	Rate	Amount
	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	48984.000metre	@179.74/metre	8804384.16
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	104976.000metre	@195.27/metre	20498663.52
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.			
	Net Total	6400.000metre	@31.77/metre	203328.00
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	240.000cum	@394.70/cum	94728.00
3.015	100.60.8.1			
	Replacing the chocked / 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	2807.000no	@4031.21/no	11315606.47

Sl No	Specification	Quantity	Rate	Amount
3.016	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	64.500cum	@8340.91/cum	537988.70
			Heading Total(Rs)	83657159.43
4	**Road Restoration Charges**			
4.001	3.11			
	Removal of unserviceable soil including excavation, loading and disposal upto 1000 metres lead but excluding replacement by suitable soil which shall be paid separately as per clause 305.			
	Net Total	12820.000cum	@49.16/cum	630231.20
4.002	10.2			
	Maintenance of Earthen Shoulder (filling with fresh soil) Making up the loss of material/ irregularities on the shoulder to the design level by adding fresh approved soil and compacting it with appropriate equipment.			
	Net Total	4880.000sqm	@53.74/sqm	262251.20
4.003	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			
	Net Total	5930.000cum	@3283.03/cum	19468367.90
4.004	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	1250.000cum	@3375.91/cum	4219887.50
4.005	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	900.000sqm	@73.49/sqm	66141.00
4.006	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			

Sl No	Specification	Quantity	Rate	Amount
	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.			
	Net Total	600.000sqm	@211.89/sqm	127134.00
4.007	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			
	Net Total	600.000sqm	@113.75/sqm	68250.00
4.008	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.			
	Net Total	900.000sqm	@14.49/sqm	13041.00
4.009	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	15.000cum	@8758.31/cum	131374.65
4.010	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	300.000sqm	@11.95/sqm	3585.00
4.011	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	9.000cum	@13072.20/cum	117649.80
4.012	12.8.B.1			
	Plain/Reinforced Cement Concrete in Open Foundation complete as per Drawing and Technical Specifications PCC Grade M20 			
	Net Total	660.000cum	@8377.76/cum	5529321.60
4.013	12.4			

Sl No	Specification	Quantity	Rate	Amount
	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.			
	Net Total	1320.000cum	@6718.30/cum	8868156.00
4.014	OD109487/2022-2023			
	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	1500.000sqm	@120.37/sqm	180555.00
4.015	OD109488/2022-2023			
	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	1500.000sqm	@414.94/sqm	622410.00
			Heading Total(Rs)	40308355.85
			Total Estimation PAC	295301692.08
Sl No	**Description**		**Percentage/LS**	**Amount**
5	**Lumsum Heading**			
5.001	Water connection charges (KWA)			
		null	null%	3609160.00
			Total Lumsum Amount	3609160.00
6	**Extra Charges**			
5.001	Provision for GST			
		295301692.08	18.00%	53154304.57
			Grand Total	0.00
			Round off	0.00
			Rounded Total(Rs)	352065156.65
	Rupees Thirty Five Crore Twenty Lakh Sixty Five Thousand One Hundred and Fifty Six			