

**ABSTRACT ESTIMATE**

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

SI No	Specification	Quantity	Rate	Amount
<b>1</b>	<b>Supplying , Laying and commissioning of Distribution- Cost of materials</b>			
1.001	100.98.119			
	Supply of DI K9 Pipe Conforming to IS 8329/2000, 300mm Dia.			
	Net Total	10.000metre	@4520.65/metre	45206.50
1.002	100.98.118			
	Supply of DI K9 Pipe Conforming to IS 8329/2000, 250mm Dia.			
	Net Total	10.000metre	@3616.52/metre	36165.20
1.003	100.98.116			
	Supply of DI K9 Pipe Conforming to IS 8329/2000, 150mm Dia.			
	Net Total	1681.000metre	@1890.46/metre	3177863.26
1.004	100.98.115			
	Supply of DI K9 Pipe Conforming to IS 8329/2000, 100mm Dia.			
	Net Total	8519.000metre	@1257.56/metre	10713153.64
1.005	100.98.134			
	Supply of HDPE Pipe PE 100 (IS 4984/1995), 8kg, 90mm Outer Dia.			
	Net Total	3489.000metre	@212.57/metre	741656.73
1.006	OD89818/2022-2023			
	90mm HDPE Specials (8kg)			
	Net Total	3489.000metre	@6.37/metre	22224.93
1.007	100.98.154			
	Supply of HDPE Pipe PE 100 (IS 4984/1995), 10kg, 90mm Outer Dia.			
	Net Total	1987.000metre	@264.59/metre	525740.33
1.008	OD89819/2022-2023			
	Specials for 90 mm HDPE pipe(10kg)			
	Net Total	1987.000metre	@7.95/metre	15796.65
1.009	100.98.194			

SI No	Specification	Quantity	Rate	Amount
	Supply of HDPE Pipe PE 100 (IS 4984/1995), 16kg, 90mm Outer Dia.			
	Net Total	15652.000metre	@376.08/metre	5886404.16
1.010	OD89820/2022-2023 Specials for 90mm HDPE Pipe (16kg)			
	Net Total	15652.000metre	@11.29/metre	176711.08
1.011	100.98.440 Supply of CI Air Valve, Conforming to IS 14848 - 2000, Single Orifice, Small Orifice Type S1, Size 25mm.			
	Net Total	40.000no	@5636.76/no	225470.40
1.012	100.98.441 Supply of CI Air Valve, Conforming to IS 14848 - 2000, Single Orifice, Small Orifice Type S1, Size 40mm.			
	Net Total	15.000no	@6110.65/no	91659.75
1.013	100.98.436 Supply of CI Air Valve, Conforming to IS 14848 - 2000, Kinetic Air Valve Type DK, Size 80mm.			
	Net Total	2.000no	@11748.57/no	23497.14
1.014	100.98.463 Supply of CI Double Flanged Sluice Valve Conforming to IS 14846 - 2000, Sluice Valve with Cap PN 1.6, Size 300mm.			
	Net Total	1.000no	@43312.34/no	43312.34
1.015	100.98.474 Supply of CI Double Flanged Sluice Valve Conforming to IS 14846 - 2000, Sluice Valve with Cap PN 1.0, Size 250mm.			
	Net Total	1.000no	@32125.93/no	32125.93
1.016	100.98.472 Supply of CI Double Flanged Sluice Valve Conforming to IS 14846 - 2000, Sluice Valve with Cap PN 1.0, Size 150mm.			
	Net Total	4.000no	@12424.57/no	49698.28
1.017	100.98.470 Supply of CI Double Flanged Sluice Valve Conforming to IS 14846 - 2000, Sluice Valve with Cap PN 1.0, Size 100mm.			
	Net Total	6.000no	@8362.80/no	50176.80
1.018	100.98.469 Supply of CI Double Flanged Sluice Valve Conforming to IS 14846 - 2000, Sluice Valve with Cap PN 1.0, Size 80mm.			
	Net Total	17.000no	@6136.20/no	104315.40

SI No	Specification	Quantity	Rate	Amount
	<b>Heading Total(Rs)</b>			21961178.5 2
<b>2 Supplying , Laying and commissioning of Distribution- Working charges</b>				
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	12453.930cu m	@579.88/cum	7221784.93
2.002	100.1.5 Excavating trenches of required width for pipes, cables, etc., including excavation for sockets, and dressing of sides, ramming of bottoms, depth up to 1.5m, including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20cm in depth, including consolidating each deposited layer by ramming, watering, etc., and disposing of surplus excavated soil as directed, within a lead of 50 m, in Ordinary Rock.			
	Net Total	2490.786cum	@842.08/cum	2097441.07
2.003	100.2.2 Excavation work by mechanical means (Hydraulic excavator) / manual means in foundation trenches or drains (not exceeding 1.5m in width or 10m <sup>2</sup> on plan), including dressing of sides and ramming of bottoms, lift up to 1.5m, including getting out the excavated soil and disposal of surplus excavated soils as directed, within a lead of 50m, in Medium Rock where Blasting is Prohibited.			
	Net Total	830.262cum	@1106.31/cum	918527.15
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.			
	Net Total	830.262cum	@1624.47/cum	1348735.71
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.			
	Net Total	28000.000met re	@28.84/metre	807520.00
2.006	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.			

SI No	Specification	Quantity	Rate	Amount
	Net Total	10.000metre	@214.16/metre	2141.60
2.007	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			
	Net Total	2.000joint	@430.66/joint	861.32
2.008	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			
	Net Total	10.000metre	@57.78/metre	577.80
2.009	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	10.000metre	@170.23/metre	1702.30
2.010	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	2.000joint	@329.85/joint	659.70
2.011	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			
	Net Total	10.000metre	@53.00/metre	530.00
2.012	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	1705.000metre	@91.51/metre	156024.55
2.013	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	315.000joint	@184.10/joint	57991.50
2.014	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	8.000no	@402.30/no	3218.40

SI No	Specification	Quantity	Rate	Amount
2.015	OD111147/2022-2023			
	Labour for cutting DI pipe with steel saw 150 mm diameter of DI Pipe			
	Net Total	4.000Each Cut	@337.10/Each Cut	1348.40
2.016	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	1705.000metre	@32.86/metre	56026.30
2.017	100.14.1			
	Conveying and laying S&S Centrifugally Cast (Spun) / Ductile Iron Pipes conforming to IS: 8329 excluding cost of pipes and specials: 100mm diameter Ductile Iron Class K-9 Pipes.			
	Net Total	8326.000metre	@61.40/metre	511216.40
2.018	18.70.1			
	Providing push - on-joints to Centrifugally (Spun) Cast Iron Pipes or Ductile Iron Pipes including testing of joints and including the cost of rubber gasket:100 mm dia pipes			
	Net Total	1520.000joint	@112.62/joint	171182.40
2.019	18.30.2			
	Providing flanged joints to double flanged C.I./ D.I pipes and specials, including testing of joints:100 mm diameter pipe			
	Net Total	3.000no	@325.59/no	976.77
2.020	OD113362/2022-2023			
	Labour for cutting DI pipe with steel saw 100 mm diameter of DI Pipe			
	Net Total	32.000Each Cut	@179.40/Each Cut	5740.80
2.021	100.35.1			
	Testing 100mm DI/CI pipeline with potable water to the required test pressure 100 mm dia			
	Net Total	8326.000metre	@24.36/metre	202821.36
2.022	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	382.000metre	@1064.49/metre	406635.18
2.023	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			

SI No	Specification	Quantity	Rate	Amount
	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	21128.000metre	@97.37/metre	2057233.36
2.024	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	17.000no	@613.80/no	10434.60
2.025	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	6.000no	@925.37/no	5552.22
2.026	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	4.000no	@1253.32/no	5013.28
2.027	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	1.000no	@2304.80/no	2304.80
2.028	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.			
	Net Total	1.000no	@2708.08/no	2708.08
2.029	100.32.1			
	Conveying and fixing C. I. Single Acting Air Valve of approved quality with bolts, nuts, rubber insertions etc., complete, but excluding the cost of air valve (tail pieces, if required, will be paid separately): 25mm Single Acting Air Valve.			
	Net Total	40.000no	@146.63/no	5865.20
2.030	100.32.2			
	Conveying and fixing C. I. Single Acting Air Valve of approved quality with bolts, nuts, rubber insertions etc., complete, but excluding the cost of air valve (tail pieces, if required, will be paid separately): 40mm Single Acting Air Valve.			
	Net Total	15.000no	@184.44/no	2766.60

SI No	Specification	Quantity	Rate	Amount
2.031	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	2.000no	@229.21/no	458.42
2.032	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	2400.000metre	@31.77/metre	76248.00
2.033	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	192.000cum	@394.70/cum	75782.40
2.034	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	90.000cum	@1318.13/cum	118631.70
2.035	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	3.850quintal	@14708.68/quintal	56628.42
2.036	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	95.900quintal	@21003.05/quintal	2014192.50
2.037	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	67.000metre	@5174.49/metre	346690.83
2.038	100.37.6.2			
	Fabricating M.S. flanges of diameter 150mm using 12mm thick M.S. plate including			

SI No	Specification	Quantity	Rate	Amount
	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	16.000no	@1544.03/no	24704.48
2.039	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	32.000no	@171.45/no	5486.40
2.040	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	32.000no	@648.09/no	20738.88
2.041	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	64.000no	@121.73/no	7790.72
2.042	100.37.5.1			
	In situ fabrication of M.S. pipes of size 100mm (I.D.) using 8mm thick M.S. plate including cost and conveyance charges of M.S. plate, all fabrication charges, charges of painting the steel work with two or more coat deluxe multi surface paint to give an even shade over an under-coat of primer etc., complete.			
	Net Total	16.000metre	@4182.35/metre	66917.60
2.043	100.37.5.2			
	Fabricating M.S. flanges of diameter 100mm using 12mm thick M.S. plate including cost and conveyance charges of M.S. plate, all fabrication charges, charges of painting the steel work with two or more coat deluxe multi surface paint to give an even shade over an under-coat of primer etc., complete: For pipes fabricated with 8mm thick M.S. plates.			
	Net Total	6.000no	@1161.73/no	6970.38
2.044	100.37.5.3			
	Cutting 100mm (I.D.) M.S. pipes for making bends and other specials by gas cutting including cost of gas, all labour and hire charges of tools etc., complete: For pipes fabricated with 8mm thick M.S. plates.			
	Net Total	8.000no	@119.81/no	958.48
2.045	100.37.5.4			
	Welding 100mm (I.D.) M.S. pipes for making bends and other specials by gas/electric welding machine including cost of gas and welding rods, all labour and hire charges of tools etc., complete: For pipes fabricated with 8mm thick M.S. plates.			
	Net Total	8.000no	@452.90/no	3623.20



SI No	Specification	Quantity	Rate	Amount
2.046	100.37.5.5			
	Grinding cut and weld edges of 100mm (I.D.) M.S. pipes during fabrication work including all labour and hire charges of tools etc., complete: For pipes fabricated with 8mm thick M.S. plates.			
	Net Total	16.000no	@85.07/no	1361.12
2.047	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			
	Net Total	96.000cum	@223.41/cum	21447.36
2.048	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	74.013cum	@8340.91/cum	617335.77
2.049	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	180.313cum	@9483.13/cum	1709931.62
2.050	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	10832.604kilogram	@102.61/kilogram	1111533.50
2.051	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.			
	Net Total	710.800sqm	@748.62/sqm	532119.10
2.052	5.9.3			
	Centering and shuttering including strutting, etc. and removal of form for:Suspended floors, roofs, landings, balconies and access platform			
	Net Total	25.000sqm	@851.49/sqm	21287.25
2.053	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.			
	Net Total	720.000sqm	@115.55/sqm	83196.00

SI No	Specification	Quantity	Rate	Amount
2.054	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.)			
		Net Total	576.000sqm @398.31/sqm	229426.56
2.055	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.			
		Net Total	144.000sqm @1055.86/sqm	152043.84
			<b>Heading Total(Rs)</b>	23371046.31
<b>3</b>	<b>Providing FHTCs</b>			
3.001	100.60.13.4.2			
	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.			
		Net Total	81.000no @7250.47/no	587288.07
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,			

SI No	Specification	Quantity	Rate	Amount
	and as per the direction of the departmental officers.			
	Net Total	122.000no	@8133.95/no	992341.90
3.003	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	805.000no	@7137.54/no	5745719.70
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.			
	Net Total	857.000no	@8021.00/no	6873997.00
3.005	100.60.13.7.2			
	Providing 15mm (1/2 inch) house connection with 15mm water meter from existing CI mains up to 125 mm dia., up to a length of 5 m using 20mm ( 1/2 inch ) PE Pipe, PE80, PN16, Conforming to IS 4984: 2016 or later edition and PP PN 16 Compression / GM / Brass specials viz. brass ferrule, brass hexagonal nipple, GM full way wheel valve, bend, MTA, FTA, couplers etc. and connecting with the mains, testing the joints etc. complete including trenching and refilling in all kinds of soil up to a depth of 1.50m for main line tracing and trench of average cross section 0.3m x 0.75m for laying connection pipe and service pipe, fixing water meter, lighting, watching, providing caution boards, traffic control etc. complete including cost of materials, hire for tools, cost of consumables and labour charges, including the cost of tested Class B Multijet water meter with ISI mark and weather resistant PP / PE meter box of minimum size 300mm x 200mm x 150mm, but excluding charges for cutting the concrete / tarred / bituminous roads etc, and as per the direction of the departmental officers			
	Net Total	150.000no	@8321.22/no	1248183.00

SI No	Specification	Quantity	Rate	Amount	
3.006	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	200.000no	@9204.69/no	1840938.00
3.007	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	72.000no	@8624.50/no	620964.00
3.008	100.60.14.9.2 Providing 20mm (3/4 inch) house connection with 15mm water meter from existing CI mains from 150mm to 200mm dia., up to a length of 5 m using 25mm ( 3/4 inch ) PE Pipe, PE80, PN16, Conforming to IS 4984: 2016 or later edition and PP PN 16 Compression / GM / Brass specials viz. brass ferrule, brass hexagonal nipple, GM full way wheel valve, bend, MTA, FTA, couplers etc. and connecting with the mains, testing the joints etc. complete including trenching and refilling in all kinds of soil up to a depth of 1.50m for main line tracing and trench of average cross section 0.3m x 0.75m for laying connection pipe and service pipe, fixing water meter, lighting, watching, providing caution boards, traffic control etc. complete including cost of materials, hire for tools, cost of consumables and labour charges, including the cost of tested Class B Multijet water meter with ISI mark and weather resistant PP / PE meter box of minimum size 300mm x 200mm x 150mm, but excluding charges for cutting the concrete / tarred / bituminous roads etc, and as per the direction of the departmental officers.				
		Net Total	106.000no	@9507.98/no	1007845.88

SI No	Specification	Quantity	Rate	Amount
3.009	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	1108.000no	@996.49/no	1104110.92
3.010	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	1285.000no	@1252.94/no	1610027.90
3.011	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	1108.000no	@683.67/no	757506.36
3.012	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	1285.000no	@785.68/no	1009598.80
3.013	100.60.15.1.1			
	Providing additional length of house connection pipe using 20 mm (1/2 inch) PE Pipe, PE80, PN16, Conforming to IS 4984: 2016 or later edition and PN16 specials and testing the joints etc., by trenching and refilling in all kinds of soil with trench of average cross section 0.3m x 0.75m for laying of connection pipe and service pipe, lighting, watching, providing caution boards, traffic control etc., including cost of materials, hire for tools, cost of consumables and labour charges etc. complete, but excluding the cost of cutting of concrete / tarred / bituminous roads etc., and as per the directions of the department officers.			
	Net Total	26592.000metre	@179.74/metre	4779646.08
3.014	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			

SI No	Specification	Quantity	Rate	Amount
	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	61680.000metre	@195.27/metre	12044253.60
3.015	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)			
	Net Total	90.000cum	@2134.74/cum	192126.60
3.016	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	20000.000metre	@31.77/metre	635400.00
3.017	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
			<b>Heading Total(Rs)</b>	41144675.81
<b>4 Road restoration charges PWD/SH/NH</b>				
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			
	Net Total	2888.000cum	@48.79/cum	140905.52
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			
	Net Total	2400.000cum	@3283.03/cum	7879272.00
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			

SI No	Specification	Quantity	Rate	Amount
	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	288.000cum	@3375.91/cum	972262.08
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.			
	Net Total	2900.000sqm	@73.49/sqm	213121.00
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.			
	Net Total	2900.000sqm	@14.49/sqm	42021.00
4.006	5.3.2.a			
	Providing and laying bituminous macadam with 80-100 TPH hot mix plant producing an average output of 75 tonnes per hour using crushed aggregates of specified grading premixed with a bituminous binder (VG 30), transported to the site, laid over a previously prepared surface with paver finisher to the required grade, level, and alignment and rolled as per clauses 501.6 and 501.7 to achieve the desired compaction For Grading II - (19 mm nominal size)			
	Net Total	45.000cum	@8758.31/cum	394123.95
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.			
	Net Total	1500.000sqm	@11.95/sqm	17925.00
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)			
	Net Total	27.000cum	@13387.00/cum	361449.00
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.			
	Net Total			

SI No	Specification	Quantity	Rate	Amount
	Net Total	1400.000sqm	@211.89/sqm	296646.00
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			
	Net Total	1400.000sqm	@113.75/sqm	159250.00
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.			
	Net Total	150.000cum	@6718.30/cum	1007745.00
4.012	12.8.B.1			
	Plain/Reinforced Cement Concrete in Open Foundation complete as per Drawing and Technical Specifications &lt;br&gt; PCC Grade M20&lt;br&gt;			
	Net Total	50.000cum	@8377.76/cum	418888.00
			<b>Heading Total(Rs)</b>	11903608.55
<b>5</b>	<b>Road restoration charges LSGD</b>			
5.001	3.5.3			
	Excavation in Soil using Hydraulic Excavator and Tippers with disposal upto 1000 m &lt;br&gt; 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			
	Net Total	830.000cum	@37.83/cum	31398.90
5.002	4.1.A.1			
	Granular Sub-base with Well Graded Material (Table 400.1) &lt;br&gt; (A) By Mix in Place Method &lt;br&gt; 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. &lt;br&gt; (i) For Grading I Material			
	Net Total	440.000cum	@3094.44/cum	1361553.60
5.003	4.9			
	Wet Mix Macadam &lt;br&gt; 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 & amp; 400.12 and Technical Specification Clause 406. &lt;br&gt; By Mechanical Means with 1 km lead			



SI No	Specification	Quantity	Rate	Amount
	Net Total	240.000cum	@3459.12/cum	830188.80
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			
	Net Total	2000.000sqm	@88.50/sqm	177000.00
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.			
	Net Total	2000.000sqm	@16.11/sqm	32220.00
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)			
	Net Total	2000.000sqm	@206.69/sqm	413380.00
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)			
	Net Total	2000.000sqm	@87.63/sqm	175260.00
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)			
	Net Total	150.000cum	@8633.95/cum	1295092.50
	<b>Heading Total(Rs)</b>			4316093.80
	<b>Total Estimation PAC</b>			102696602.99
SI No	Description	Percentage/LS	Amount	
<b>6 Lumsum Heading</b>				
6.001	Water connection charges (KWA)			

SI No	Specification	Quantity	Rate	Amount
		null	null%	2066335.00
		<b>Total Lumsum Amount</b>		2066335.00
<b>7</b>	<b>Extra Charges</b>			
6.001	Provision for GST			
		102696602.99	18.00%	18485388.54
		<b>Grand Total</b>		123248326.53
		<b>Round off</b>		1673.47
		<b>Rounded Total(Rs)</b>		123250000.00
	Rupees Twelve Crore Thirty Two Lakh Fifty Thousand			

