

MULTI MODAL LOGISTIC PARK, JOGIGHOPA		
CONSTRUCTION OF INFRASTRUCTURE DEVELOPMENT WORKS		
GENERAL ABSTRACT		
S.No	Components	Amount (Lakhs)
<b>A</b>	<b>Infrastructure Works</b>	
1	Raw Water External System	46363767.59
2	Potable Water System	22095606.50
3	Fire Fighting Water System	13147489.00
4	Recycled Treated Water System	6894435.50
5	Underground Sewerage System	67967562.91
6	Storm Water Drains	63484427.00
	<b>Sub Total - A</b>	<b>219953288.50</b>
<b>B</b>	<b>GST &amp; Other L.S provisions</b>	
7	Provision towards Works Contract GST @ 12%	26394395.00
8	Unforeseen items	9052316.95
	<b>Sub Total - B</b>	<b>35446711.95</b>
	<b>Grand Total (A+B)</b>	<b>255400000.45</b>
	<b>Grand Total in Lakhs</b>	<b>2554.00</b>
	<b>Grand Total in Crores</b>	<b>25.54</b>

MULTIMODAL LOGISTIC PARK, JOGIGHOPA		
PROPOSED EXTERNAL WATER SUPPLY SYSTEM		
ABSTRACT ESTIMATE		
S.No	Components	Amount (Rs.)
<b>A</b>	<b>Pumping Main Arrangements:</b>	
1	Construction of Intake Well at Brahmaputra River near to MMLP	5000000.00
2	Supply,Delivery and Erection of Vertical Turbine Pump sets from Intake to Raw water Sump	1227042.00
3	Providing 250 DI Class K-9 Pumping Main from Intake to Raw Water Sump near WTP including valves, valve chambers etc. complete.	26722659.09
4	Construction of 150 KLD Raw Water Sump at WTP	2457137.00
5	Supply,Delivery and Erection of Submersible Pump sets from Raw water Sump to WTP	374929.50
6	Construction of 2.00 MLD Capacity Rapid Gravity Filtration Plant including civil, mechanical and electrical fully automation including trial running etc., complete	10582000.00
	<b>Sub Total - A</b>	<b>46363767.59</b>
<b>B</b>	<b>GST &amp; Other L.S provisions</b>	
7	Provision towards Works Contract GST @ 12%	5563652.00
8	Unforeseen items	3072580.41
	<b>Sub Total - B</b>	<b>8636232.41</b>
	<b>Grand Total (A+B)</b>	<b>55000000.00</b>
	<b>Grand Total in Lakhs</b>	<b>550.00</b>

MULTIMODAL LOGISTIC PARK, JOGIGHOPA										
ABSTRACT ESTIMATE										
Pumping From Intake to WTP										
										16.02Lakh
SI No	Description	Nos			Quantity		Rate		Amount	
1	Design, Manufacture, Supply, delivery, erection, testing and commisioning of pumping Machinery(ISI) with all accessories, appurtenances, surge protection devices , ultrasonic flowmeter on common delivery main at each pumping station, piping as per design requirement and as directed by the department on turn-key basis including trial run.									
1.a	Pump at Intake to Raw water Sump 18 Hp Pumps	1	x	2	18	Hp	34084.50	Each	1227042.00	
1.b	Pump at Raw water Sump to WTP 11 Hp Pumps	1	x	2	11	Hp	17042.25	Each	374929.50	

**MULTIMODAL LOGISTIC PARK, JOGIGHOPA****WATER TREATMENT PLANT****ABSTRACT ESTIMATE****Name of Work: Construction of 2.00 MLD Capacity Rapid Sand Gravity Filtration Plant**

			Estimate Amount		105.82	Lakhs
SL NO	QUANTITY	DESCRIPTION OF ITEM	Reference	Rate	Per	Amount
1		Construction of Rapid Gravity Filtration Plant including civil, mechanical and electrical fully automation including trial running etc., complete				
		h)The components of the Filtration Plant are as follows.				
	A	Civil Works:				
		(all works of VRCC shall be in M30 design mix).				
		1)Stilling chamber .				
		2)Ventury flume channel with measuring devices				
		3)Flash mixer chamber				
		4) Tube settler & flocculation tanks.				
		5)Filter house, chemical house, Alum store, laboratory office room chlorination plant room, toilet etc. (All items shall be under RCC roof only ). Separate Isolated chemical house & chlorinator room for treatment 15.00 mld & above. For more than 5mld separateChemical house has to be provided.				
		6)Wash water tank of suitable capacity.				
		7) All the doors and windows are of aluminimum make				
		8) All pipes and valves in filter beds are of D.I. make & connection from Flash mixer to Tube settler / Flocculation tank, sludge disposal pipes are of C.I. make.				
		9) The bottom level of the clear water control chamber must be above G.L so as to dispose the leakage water by gravity.				
		10) Clarifluculator bridge including sludge srcapping arrangement shall be with stainless steel of Grade 304 for chemical resistance and durability.				
	C	Mechanical Equipment				
		1)Alum dosing equipment				
		2)Flash mixer equipment.				
		3)Sludge disposal fittings by gravity				
		4)Filtration plant equipmnet instrumentation and piping.				
		5)Clarifloccualation equipment (with stainless steel blades) with rotating bridge arrangeemnt etc.,				
		6)Wash water tank fittings and pumpsets with 100% stand by.				
		7)Air blower with motor 100% stand by and pipe connections.				
		8) Chlorination equipment and pipe connections with chlorinator of 100% standbye,Vaccum feed Gas Chlorination has to provided.				
		9)Spares & Tools for 2 years				

		10)Gaseous Chlorination with cylinders has to provided.				
	C	Electrical Equipement				
		1)Necessary power supply wiring to motors and switches bus bar connections as per I.E. Rules				
		2)Internal wiring and illumination and fittings and fixtures for internal and external lighting exhaust fans, ceiling fans etc.				
		3) Erecting mechanical & Electrical equipment, trial run for 90 days 23.50 hours per day testing the treated water for efficient standards and maintenance of records and <u>imparting training to staff.</u>				
		4)Supply of 6 - sets of completion plans and maintenance manual and brochures.				
		5)Provision towards soil investigation.				
	D	Automation for flow measurements				
		1)Automated Lab testing equipment of internationally reputed make and consumables for one year. For filtration plants of capacity 10 MLD and more automated online testing equipment shall be installed.				
		2) Automation for flow of Conductivity, Turbdity,Ph value, Residual Chlorine with recording & Storage facility (Computer based) & Alaram by SMS or other methods.				
		3)Off - Site Supervisory and Data Accusation (OSSADA) system for Raw water and clear water measuring, recording, Off-Site Digital Display and data Transmission to Cell Phone(SMS).				
		1) Alam tanks must be bound with corroision resistant material (HDPE Lining, Bitumen Coating, tiles etc)				
		2) Mechanical equipment for alam mixing and in flocculation tank must be corrosive resistant (due to Alam)				
	2000000.00 Litre			5.29	1 Litre	10582000.00
					<b>Say</b>	<b>105.82 Lakhs</b>

Cost Analysis for WTP	
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**MULTIMODAL LOGISTIC PARK, JOGIGHOPA**

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**MULTIMODAL LOGISTIC PARK, JOGIGHOPA**

Laying of DI K9 Pumping mains from Intake to Raw Water Sump												
DETAILED & ABSTRACT ESTIMATION												
S. N.	Description of Item	No			L	B	D	Quantity		Rate	Per	Amount
	<b>Total EWE Quantity</b>											
	100	1	x	1	0.00	0.75	1.00	0.00				
	150	1	x	1	0.00	0.75	1.10	0.00				
	200	1	x	1	0.00	0.75	1.10	0.00				
	250	1	x	1	4500.00	0.75	1.20	4050.00				
	300	1	x	1	0.00	0.75	1.20	0.00				
	350	1	x	1	0.00	0.80	1.30	0.00				
	400	1	x	1	0.00	0.80	1.30	0.00				
	450	1	x	1	0.00	0.90	1.40	0.00				
	500	1	x	1	0.00	0.90	1.40	0.00				
	600	1	x	1	0.00	1.00	1.50	0.00				
	700	1	x	1	0.00	1.20	1.70	0.00				
	800	1	x	1	0.00	1.20	1.70	0.00				
	Total EWE Qty							<b>4050.00</b>	Cum			
1	Cutting open bituminous tar road surface including depositing of excavated materials for trench work including labour charges and all incidental and operational charges etc., complete. SSR SI.No.25a (PH SSR).											
	100	1	x	1	0.00	0.75	<b>0.10</b>	0.00				
	150	1	x	1	0.00	0.75	0.10	0.00				
	200	1	x	1	0.00	0.75	0.10	0.00				
	250	1	x	1	680.00	0.75	0.10	51.00				
	300	1	x	1	0.00	0.75	0.10	0.00				
	350	1	x	1	0.00	0.80	0.10	0.00				
	400	1	x	1	0.00	0.80	0.10	0.00				
	450	1	x	1	0.00	0.90	0.10	0.00				
	500	1	x	1	0.00	0.90	0.10	0.00				
	600	1	x	1	0.00	1.00	0.10	0.00				
	700	1	x	1	0.00	1.20	0.10	0.00				
	800	1	x	1	0.00	1.20	0.10	0.00				
								<b>51.00</b>	Cum	<b>121.97</b>	1 Cum	6220.47
2	Cutting open cement concrete road surface including depositing of excavated materials for trench work including labour charges and all incidental and operational charges etc., complete. SSR SI.No.25b (PH SSR).											
	100	1	x	1	0.00	0.75	<b>0.15</b>	0.00				
	150	1	x	1	0.00	0.75	0.15	0.00				
	200	1	x	1	0.00	0.75	0.15	0.00				
	250	1	x	1	1800.00	0.75	0.15	202.50				
	300	1	x	1	0.00	0.75	0.15	0.00				
	350	1	x	1	0.00	0.80	0.15	0.00				
	400	1	x	1	0.00	0.80	0.15	0.00				





S. N.	Description of Item	No			L	B	D	Quantity		Rate	Per		Amount
	% of the EWE Quantity	1	x	1	4050.00	10%		405.00	Cum	365.12	1	Cum	147873.60
7	Excavation in Hard Rock by mechanical means in habitant areas where conventional blasting can not be done for Pipe line trenches as per drawings and technical specifications including setting out, construction of shoring and bracing, removal of stumps and other deleterious material , dressing of sides and bottom as per Technical Specification 305 MoRD / 304 MoRTH and as directed by the departmental officer including protecting the existing utility services wherever it is possible during the execution and taking all precautionary measures in the restricted areas for laying sewer/water pipe lines including diversion of traffic and disposal of rock upto a lead of 50 m, including all incidental and operational charges etc., complete												
	% of the EWE Quantity	1	x	1	4050.00	15%		607.50	Cum	745.79	1	Cum	453067.43
8	RBR-FNDN-1 - manual means : Earthwork excavation for structures in all types of soil as per drawing and technical specifications including setting out, construction of shoring and bracing, removal of stumps and other deleterious material and disposal upto a lead of 50 m, dressing of sides and bottom and backfilling in trenches with excavated suitable material as per Technical Specification 305 MORD / 304 MORTH. for Sumps,Thrust blocks, Chambers and Man Holes etc.												
	<b>bends and specials</b>												
	for specials of 200mm dia	1	x	0	1.60	1.70	1.30	0.00					
	for specials of 250mm dia	1	x	9	1.60	1.70	1.30	31.82					
	for specials of 300mm dia	1	x	0	1.60	1.70	1.30	0.00					
	for specials of 350mm dia	1	x	0	1.70	1.80	1.40	0.00					
	for specials of 400mm dia	1	x	0	2.20	1.80	1.40	0.00					
	for specials of 450mm dia	1	x	0	2.20	1.80	1.40	0.00					
	for specials of 500mm dia	1	x	0	2.40	1.90	1.50	0.00					
	for specials of 600mm dia	1	x	0	2.40	1.90	1.50	0.00					
	Add for thrust blocks							250.00					
								281.82	Cum	208.07	1	Cum	58638.15
9	Manufacture supply delivery, of 250 mm dia DI K9 centrifugally cast (spun) ductile iron pipes for water with socket and spigot ends confirming to IS NO 8329/2000 in standard lengths of 5.50 m suitable for push-on-joint (rubber gasket D jointing) with cement mortar lining inside and zinc coating out side including transportation ,loading,unloading, stacking,excluding taxes and CED, etc complete												
	100	1	x	1	0.00			0.00	Rmt	1207.62	1	Rmt	0.00
	150	1	x	1	0.00			0.00	Rmt	1686.29	1	Rmt	0.00
	200	1	x	1	0.00			0.00	Rmt	2119.54	1	Rmt	0.00
	250	1	x	1	4500.00			4500.00	Rmt	3053.47	1	Rmt	13740608.25
	300	1	x	1	0.00			0.00	Rmt	3977.51	1	Rmt	0.00
	350	1	x	1	0.00			0.00	Rmt	4972.34	1	Rmt	0.00
	400	1	x	1	0.00			0.00	Rmt	6004.40	1	Rmt	0.00

S. N.	Description of Item	No			L	B	D	Quantity		Rate	Per	Amount
	450	1	x	1	0.00			0.00	Rmt	<b>7248.31</b>	1 Rmt	0.00
	500	1	x	1	0.00			0.00	Rmt	<b>8644.08</b>	1 Rmt	0.00
	600	1	x	1	0.00			0.00	Rmt	<b>11569.30</b>	1 Rmt	0.00
	700	1	x	1	0.00			0.00	Rmt	<b>15160.88</b>	1 Rmt	0.00
	800	1	x	1	0.00			0.00	Rmt	<b>20030.24</b>	1 Rmt	0.00
10	PHE-LCIS-1: Lowering C.I. / D.I. Pipes (all classes) and specials (fittings) with s/s ends carefully into trenches and laying them true to alignment and gradient including all sundries but excluding cost and conveyance of pipes from source of supply (Ref to specifications. BIS No.3114/1994)											
	100	1	x	1	0.00			0.00	Rmt	<b>42.31</b>	1 Rmt	0.00
	150	1	x	1	0.00			0.00	Rmt	<b>68.92</b>	1 Rmt	0.00
	200	1	x	1	0.00			0.00	Rmt	<b>100.19</b>	1 Rmt	0.00
	250	1	x	1	4500.00			4500.00	Rmt	<b>135.37</b>	1 Rmt	609149.25
	300	1	x	1	0.00			0.00	Rmt	<b>175.09</b>	1 Rmt	0.00
	350	1	x	1	0.00			0.00	Rmt	<b>219.60</b>	1 Rmt	0.00
	400	1	x	1	0.00			0.00	Rmt	<b>268.01</b>	1 Rmt	0.00
	450	1	x	1	0.00			0.00	Rmt	<b>324.21</b>	1 Rmt	0.00
	500	1	x	1	0.00			0.00	Rmt	<b>377.94</b>	1 Rmt	0.00
	600	1	x	1	0.00			0.00	Rmt	<b>504.61</b>	1 Rmt	0.00
	700	1	x	1	0.00			0.00	Rmt	<b>651.00</b>	1 Rmt	0.00
	800	1	x	1	0.00			0.00	Rmt	<b>814.80</b>	1 Rmt	0.00
11	PHE-JCIR-4: Jointing the, D.I. Pipes & fittings with Rubber Gasket, including the cost of the gasket, all sundries filling with water with a water lead upto 500 m and testing to required pressure etc., complete as per BIS No.3114/85. 300 mm dia											
	100	1	x	0				0	Nos	<b>254.63</b>	1 Nos	0.00
	150	1	x	0				0	Nos	<b>343.68</b>	1 Nos	0.00
	200	1	x	0				0	Nos	<b>401.99</b>	1 Nos	0.00
	250	1	x	982				982	Nos	<b>453.03</b>	1 Nos	444876.44
	300	1	x	0				0	Nos	<b>614.81</b>	1 Nos	0.00
	350	1	x	0				0	Nos	<b>759.81</b>	1 Nos	0.00
	400	1	x	0				0	Nos	<b>828.70</b>	1 Nos	0.00
	450	1	x	0				0	Nos	<b>911.88</b>	1 Nos	0.00
	500	1	x	0				0	Nos	<b>1164.25</b>	1 Nos	0.00
	600	1	x	0				0	Nos	<b>1372.38</b>	1 Nos	0.00
	700	1	x	0				0	Nos	<b>1742.53</b>	1 Nos	0.00
	800	1	x	0				0	Nos	<b>1898.83</b>	1 Nos	0.00

S. N.	Description of Item	No			L	B	D	Quantity		Rate	Per		Amount
12	Manufacture, supply and delivery of centrifugally cast (spun ) ductile iron fittings conforming to IS No. 9523/2000 having dimentions as per table. , zinc coated externally with inside mortor lining (with finishing as per class 13/IS 9523/2000 including transportation, but excluding taxes and duties etc. for Double socket bends												
a)	<b>Up to 500mm dia</b>												
i)	<b>Air Tees</b>												
	200*200*80mm Air Tee	1	x	0	39.00			0.00					
	250*250*80mm Air tee	1	x	18	45.00			810.00					
	300*300*80mm Air Tee	1	x	0	58.00			0.00					
	350*350*100mm Air Tee	1	x	0	111.00			0.00					
	400*400*100mm Air Tee	1	x	0	140.00			0.00					
	450*450*100mm Air Tee	1	x	0	175.00			0.00					
	500*500*100mm Air Tee	1	x	0	220.00			0.00					
	600*600*100mm Air Tee	1	x	0	220.00			0.00					
	<b>Scour Tees</b>												
	200 x 200x150mm scour Tee	1	x	0	43.00			0.00					
	250 x 250x150mm scour Tee	1	x	4	62.00			248.00					
	300*300*150mm Scour Tee	1	x	0	68.00			0.00					
	350*350*150mm Scour Tee	1	x	0	87.00			0.00					
				4									
	400*400*200mm Scour Tee	1	x	0	145.00			0.00					
	450*450*200mm Scour Tee	1	x	0	180.00			0.00					
	500*500*200mm Scour Tee	1	x	0	224.00			0.00					
				0									
ii)	<b>Flanged Sockets /Spigot</b>												
	150 mm dia	1	x	4	16.00			64.00					
	200 mm dia	0	x	0	23.00			0.00					
	250 mm dia	1	x	4	32.00			128.00					
	300 mm dia	0	x	2	42.00			0.00					
	Flanged Socket reducer												
	400/300mm taper	1	x	0	61.00			0.00					
	450/300mm taper	1	x	0	83.00			0.00					
	500/350mm dia taper	1	x	0	132.00			0.00					
	600/400mm dia taper	1	x	0	155.00			0.00					
								<b>1250.00</b>	Kg				
iii)	<b>Double socket bends</b>												
	100 mm dia	1	x	0	10.00			0.00					
	150 mm dia	1	x	0	17.00			0.00					
	200 mm dia	1	x	0	32.00			0.00					
	250 mm dia	1	x	4	46.00			184.00					
	300 mm dia	1	x	0	65.00			0.00					
	350 mm dia	1	x	0	87.00			0.00					
	400 mm dia	1	x	0	113.00			0.00					
	450 mm dia	1	x	0	147.00			0.00					
	500 mm dia	1	x	0	187.00			0.00					
	Add extra as per site condition							<b>2500.00</b>					
								<b>2684.00</b>					
	100 mm dia					Total		<b>3934.00</b>	Kg	<b>136.41</b>	1 Kg		536648.74

S. N.	Description of Item	No			L	B	D	Quantity		Rate	Per	Amount
13	Manufacture, Supply and delivery of DI D/F Gate Valves (Soft Seated) Resilient seated soft sealing gate valves (Sluice valves) with body bonnet of ductile cast iron of grade GGG40/SG- 400/15 or GGG-50/SG-500/7 or equivalent grade as per I.S.3896-part2-1985 and subsequent revisions, wedge fully rubber lined with EPDM food grade quality and seals of NBR and the valves should be of vacuum tight and 100% leak proof with face to face dimensions as per BS5163-89/IS14846-2000/DIN 3202 F 4. All the valves should be with Electrostatic powder coating both inside and outside pocket less body passage. Drilled as per IS:1538. DI. D/F Sluice valves of PN.16 class and including Transportation charges but excluding taxes and duties.											
	<b>DI. D/F Sluice valves of PN.16 class</b>											
	250mm dia Sluice Valves & Check Valves	1	x	4				4	Nos	<b>64696.60</b>	1 Nos	258786.39
	Sluice valves											
	150mm dia Sluice Valves	1	x	4				4	Nos	<b>28109.44</b>	1 Nos	112437.75
	<b>Air valves</b>											
	80mm dia Air Valve	1	x	18				18	Nos	<b>13534.33</b>	1 Nos	243617.89
	<b>Scour Valves</b>											
	150 mm dia sluice valve on 250 and 300 mm DI lines with Scour arrangements	1	x	4				4	Nos	<b>40278.00</b>	1 Nos	161112.00
14	Manufacture, Supply and delivery of DI D/F Swing Check Valves Slanted/Straight seated with metallic, corrosion proof and wear resistant seat faces resilient seat, Body and Disc of ductile cast iron GGG 40/SG Iron 420/12 or equivalent grade as per IS 3896(part2)-1985 and subsequent revisions. All the inside and outside of the body is to be coated with double coating of epoxy liquid. Drilled as per IS:1538. Specification and Dimensions as per I.S 5312 or equivalent codes and including Transportation charges but excluding taxes and duties.- 300mm Dia PN.16 class.											
	250mm Dia PN.16	1	x	1				1	Nos	<b>166144.03</b>	1 Nos	166144.03
15	Manufacture, Supply and Delivery of DI Dismantling joints with both side flange end suitable for installations in between flange end pipes including all taxes etc., Complete.											
	100mm Dia PN.16	1	x	0				0	Nos	<b>8644.29</b>	1 Nos	0.00
	150mm Dia PN.16	1	x	4				4	Nos	<b>12192.93</b>	1 Nos	48771.73
	200mm Dia PN.16	1	x	0				0	Nos	<b>17291.18</b>	1 Nos	0.00
	250mm Dia PN.16	1	x	4				4	Nos	<b>20583.75</b>	1 Nos	82334.99
	300mm dia PN.16	1	x	0				0	Nos	<b>32936.08</b>	1 Nos	0.00

S. N.	Description of Item	No			L	B	D	Quantity		Rate	Per		Amount
16	<b>PHE-CISV-15</b> : Lowering, keeping in position and fixing D.I. sluice valves (with cap / with hand wheel & reflex valves) excluding cost of bolts, nuts, rubber insertion, sluice valve and tail pieces												
	80mm dia Air Valve	1	x	18				18	Nos	128.37	1	Nos	2310.74
	100mm dia Sluice Valves	1	x	0				0	Nos	170.46	1	Nos	0.00
	150mm dia Sluice Valves	1	x	4				4	Nos	288.93	1	Nos	1155.70
	200mm dia Sluice Valves	1	x	0				0	Nos	476.65	1	Nos	0.00
	250mm dia Sluice Valves & Check Valves	1	x	4				4	Nos	677.36	1	Nos	2709.45
	300mm dia Sluice Valves for 300mm to 450mm dia pipes	1	x	0				0	Nos	964.37	1	Nos	0.00
	350mm dia Sluice Valves for 500mm dia pipes	1	x	0				0	Nos	1628.64	1	Nos	0.00
	400mm dia Sluice Valves for 600mm dia pipes	1	x	0				0	Nos	1999.62	1	Nos	0.00
	500mm dia Sluice Valves for 700mm & 750mm dia pipes	1	x	0				0	Nos	3031.09	1	Nos	0.00
17	<b>PHE-JCIF-5-</b> : Jointing DI pipes, fittings and valves with flanged ends including cost of jointing materials such as bolts, rubber insertion, white lead including filling with water, with lead up to 500 meters and testing to required pressure complete. (Reference to specifications. BIS No.3114/1994.)												
	80mm dia Air Valve	1	x	18				18	Nos	<b>228.00</b>	1	Nos	4103.98
	100mm dia Sluice Valves	1	x	0				0	Nos	<b>378.34</b>	1	Nos	0.00
	150mm dia Sluice Valves	1	x	4				4	Nos	<b>601.23</b>	1	Nos	2404.93
	200mm dia Sluice Valves	1	x	0				0	Nos	<b>657.50</b>	1	Nos	0.00
	250mm dia Sluice Valves & Check Valves	1	x	4				4	Nos	<b>950.49</b>	1	Nos	3801.95
	300mm dia Sluice Valves for 300mm to 450mm dia pipes	1	x	0				0	Nos	<b>998.13</b>	1	Nos	0.00
	350mm dia Sluice Valves for 500mm dia pipes	1	x	0				0	Nos	<b>1437.36</b>	1	Nos	0.00
	400mm dia Sluice Valves for 600mm dia pipes	1	x	0				0	Nos	<b>2285.46</b>	1	Nos	0.00
	500mm dia Sluice Valves for 700mm & 750mm dia pipes	1	x	0				0	Nos	<b>3092.88</b>	1	Nos	0.00
18	Manufacture, supply and delivery of Single Chamber DI Air Valve with Body and cover in Ductile Iron of grade SG 400/12 or equivalent grade as per I.S.3896-part2-1985 and subsequent revisions. All internal parts such as float, shell etc., all cover bolts, of stainless steel, and Gaskets and seals of EPDM food grade quality.S Epoxy powder coating (EP-P) inside and outside colour blue. Drilled as per IS:1538.												
	50 dia PN.16	1	x	0				0	Nos	<b>44145.48</b>	1	Nos	0.00

S. N.	Description of Item	No			L	B	D	Quantity	Rate	Per	Amount
	80 dia PN.16	1	x	18				18 Nos	58893.83	1 Nos	1060089.02
	100 dia PN.16	1	x	0				0 Nos	68760.17	1 Nos	0.00
19	Labour charges for fixing Kinetic Air Valves with isolating Sluice valves, Double Air valves/ Air Cushion valve excluding cost of jointing materials such as bolts, nuts and rubber insertions etc., complete.										
	50 dia PN.16	1	x	0				0 Nos	257.39	1 Nos	0.00
	80 dia PN.16	1	x	18				18 Nos	301.82	1 Nos	5432.72
	100 dia PN.16	1	x	0				0 Nos	351.46	1 Nos	0.00
20	Supply and fixing of precast RCC chambers having the size of 910mm at bottom and 530mm at top with tapers along with FRC cover and frame, laying in CC (1:2:4) prop including cost of material, labour charges, curing, conveyance etc., complete as per standard specifications and approved drawings as directed by the Engineer-in-Charge.-For up to 200mm dia Sluice valves										
	For up to 200mm dia Sluice valves and for revamping pipe lines	1	x	4				4 Nos	8010.90	1 Nos	32043.60
21	Construction of Valve chambers with M20 Grade RCC base slab, side walls and top Slab, reinforced with HYSD Bars with inside Plastering including cost and conveyance of all material, centering charges, labour charges, curing and including earth work, back filling and carting of excavated earth, etc., as per approved										
a	for 250mm dia to 350 Sluice valves	1	x	4				4 Nos	26083.15	1 Nos	104332.60
b	for 400mm dia to 650 Sluice valves	1	x	0				0 Nos	38113.30	1 Nos	0.00
22	Carting away the surplus excavated material i.e. Earth and Rubble from the site to a suitable distance of about 5.00 Km including loading, unloading, conveyance charges and dumping the carted material at the contractors cost, labour charges, all leads & lifts and other incidental and operational charges etc., complete.										
a	90% of rock Qty							405.00			
								405.00 Cum	60.38	1 Cum	24451.88
23	BLD-CSTN-3-5 (22) -Using Concrete mixture all works up to Plinth Level: Plain Cement concrete nominal mix (1:4:8) prop (Cement : fine aggregate: coarse aggregate) using 40mm size Hard Granite Machine Crushed Metal including cost and conveyance of all materials like cement, sand, coarse aggregate water etc., to site, seigniorage charges on all materials, labour charges, for mixing, laying, concrete, ramming in 15 cm layers, finishing top surface to the required level curing etc., complete for finished item of work. for foundation and under flooring bed.								WS S.No 36		
a	for bedding under thrust blocks for bends										
	250	1	x	9	1.50	1.20	0.15	2.43			
								2.43 Cum	4324.53	1 Cum	10508.61

S. N.	Description of Item	No			L	B	D	Quantity		Rate	Per		Amount
24	BLD-CSTN-3-11-(28) Using Concrete mixture up to Plinth Level Plain Cement concrete nominal mix m-20 (Cement : fine aggregate: coarse aggregate ) using 20mm size Hard Granite Machine Crushed Graded Metal including cost and conveyance of all materials like cement, sand, coarse aggregate water etc., to site , seigniorage charges on all materials, labour charges , for mixing , laying, concrete , ramming in 15 cm layers, finishing top surface to the required level curing etc., complete for finished item of work with nominal												
	<b>for Anchor blocks</b>	1	x	18	1.00	1.00	1.50	27.00					
	<b>for Thrust blocks for bends</b>			.									
		1	x	9	1.30	1.00	1.50	17.55					
								<b>44.55</b>	Cum	9966.43	1	Cum	444004.41
25	Supplying and fabrication High Yield Strength Deformed (HYSD) steel bars (Fe 415 grade as per IS 1786-1979) of different diameters for RCC works , including labour charges for straightening, cutting, bending to required sizes and shapes, placing in position with cover blocks of approved materials and size and tying and lap-splicing with binding wire of 18 SWG, forming grills for reinforcement work as per approved designs and drawings, including cost and conveyance of steel bars, including all wastages such as overlaps, couplings, chairs, spacer bars including cost and conveyance of binding wire, cover blocks and all incidental, operational, labour charges such as cutting, bending, placing in position, tying including sales and other taxes on all materials etc., complete for finished item of work BLD-CSTN-2-18												
					44.55	70.00		<b>3118.50</b>	Cum	56.53	1	kg	176301.28
26	PHE-CCIP-23: Cutting C.I./ DI / MS Pipes without water in mains where ever required (.Dia of pipes in mm.)												
	100	1	x	0				0	Nos	<b>94.70</b>	1	Nos	0.00
	150	1	x	0				0	Nos	<b>177.56</b>	1	Nos	0.00
	200	1	x	0				0	Nos	<b>236.75</b>	1	Nos	0.00
	250	1	x	18				18	Nos	<b>295.94</b>	1	Nos	5326.94
	300	1	x	0				0	Nos	<b>355.13</b>	1	Nos	0.00
	350	1	x	0				0	Nos	<b>414.31</b>	1	Nos	0.00
	400	1	x	0				0	Nos	<b>473.50</b>	1	Nos	0.00
	450	1	x	0				0	Nos	<b>532.69</b>	1	Nos	0.00
	500	1	x	0				0	Nos	<b>591.88</b>	1	Nos	0.00
	600	1	x	0				0	Nos	<b>710.25</b>	1	Nos	0.00





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**MULTIMODAL LOGISTIC PARK, JOGIGHOPA**

**CONSTRUCTION OF 150 KL CAPACITY GLSR**

**ABSTRACT ESTIMATE**

				Amount Rs. 24.57 lakhs			
Sl.No	Item Description	Quantity		Rate		Unit	Amount
1	Earthwork excavation for structures in all types of soils up to 3.00 Mts depth below GL by Mechanical means as per drawing and technical specifications including setting out, construction of shoring and bracing, removal of stumps and other deleterious material and disposal upto a lead of 50 m, dressing of sides and bottom and backfilling in trenches with excavated suitable material as per Technical Specification 305 MORD / 304 MORTH by Mechanical means						
	A) Initial Lift 3.00m	100.10	Cum	100.80	1	Cum	10,090.00
2	Excavation in hard rock (blasting prohibited) with rock breakers including breaking rock, loading in tippers and disposal with initial lift of 3 mts and lead upto 1000 metres, trimming bottom and side slopes in accordance with requirements of lines, grades and cross- sections as per Technical Specification Clause 302.3.5 MORD / 301 MORTH , by Machanical means						
	A) Extra lift over Initial Lift 2.00m	46.80	Cum	800.26	1	Cum	37,452.00
3	Plain cement concrete in (1:4:8) prop using 40 mm nominal size hard broken machine crushed granite metal as per SS including cost and conveyance of all materials, seignarage, sales tax and labour charges such as mixing concrete, laying, tamping, curin	4.10	Cum	4212.75	1	cum	17,272.00

4	Supply and placing of M30 grade Design Mix Concrete corresponding to IS 456 using WEIGH BATCHER / MIXER with 20mm size graded machine crushed hard granite metal (coarse aggregate) from approved quarry including cost and conveyance of all materials like cement, fine aggregate (sand) coarse aggregate, water etc., to site and including Seigniorage charges, sales & other taxes on all materials including all operational, incidental and labour charges such as weigh batching, machine mixing, laying concrete, curing etc., complete but excluding cost of steel and its fabrication charges for finished item of work (APSS No. 402) with minimum cement content as per IS code from standard suppliers approved by the department including pumping, centering, shuttering, laying concrete, vibrating, curing etc. complete						
a	Floor Slab	12.20	Cum	10,729.36	1	cum	1,30,898.15
b	Sidewalls of Sump 375mm th	67.20	Cum	11,162.51	1	cum	7,50,121.00
d	Ring Beams	0.00	Cum	10,093.70	1	cum	-
e	Roof slab 125mm thick	0.00	Cum	9,832.70	1	Cum	-
5	Supply and Delivery of HYSD Fe 415 grade reinforcement steel including cost and conveyance to site and labour charges, cutting, bending, fabrication, binding of reinforcement including cost of binding wire etc. complete as per SS but Excluding all taxes	9609.90	Kg	59.97	1	Kg	5,76,312.00
6	Providing impervious coat with C.M. (1:3) 20 mm thick laid when the roof slab is green with water proof compound @ 1kg/bag of cement finished smooth with a floating coat of neat cement including cost & conveyance of all materials etc complete for finished	0.00	sqm	500.55	1	sqm	-
7	Manufacturing, supply and erection of 600 mm width ladders with 50X50X6 mm MS angles 2 nos verticals and horizontals fixed at 25 cm c/c as per approved drawing and as directed by the departmental officers and painting both sides with anti corrosive paint two coats over one coat of primary coat including cost of all materials fabrication, welding transportation to site, all taxex and duties, fixing in position duly embodying in CC (1:1.5:3) prop., and all other incidental and operational charges etc., complete for finished item of work.	-16.40	kg	71.58	1	mts	(1,174.00)

8	Painting to new walls with 1 coat of acrylic exterior plastic emulsion paint of approved brand and shade after thoroughly brushing the surface to remove all dirt and remains of loose powdered materials, including cost and conveyance of all materials to work site and all operational, incidental, labour charges etc. complete for finished item of work as per SS 911 to external Walls with single coat of Polymer Plastic Emulsion paint	16.30	Sqm	144.45	1	sqm	2,355.00
9	Supplying & fixing 2 nos of 600 x 600 mm dia C.I. Manhole frame & cover (Minimum weight of each manhole with cover is 25kg) and Supplying & fixing of CI/D.I Double Swan neck ventilators (min. of 150mm dia.)	170.00	kg	87.06	1	Kg	14,800.00
10	Manufacture, supply and delivery of Centrifugally cast (spun) Ductile Iron D/F pipe and Fittings conforming to IS:9523 / 2000 having dimensions as per table. The rates mentioned here under are for fittings, zinc coated externally with inside mortar lining (with finishing as per class 13/IS 9523/2000) ( ex-works) Excluding Transportation and all Taxes. Rates are ex-factory, excluding transportation and all taxes.. including loading, unloading, transportation to site of work.	6500.00	kgs	137.38	1	kg	8,92,991.00
11	Manufacture, Supply and delivery of DI D/F Gate Valves (Soft Seated) Resilient seated soft sealing gate valves (Sluice valves) with body bonnet of ductile cast iron of grade GGG40/ SG 400/12 or equivalent grade as per I.S.3896-part2-1985 and subsequent r						
ii	150 mm dia Sluice Valve	1	No	24198.65	1	nos.	24,199.00
12	Labour charges for lowering and keeping in position of C.I. Sluice valves, reflux valves and scour valves.						
ii	150mm dia Sluice Valve	1	Nos	329.23	2	nos.	329.00
13	Jointing the CI/DI Pipes, fittings and valves with flanged ends including cost of jointing materials such as bolts, nuts, rubber insertion, white lead and including filling with water with a water lead upto 500m and testing to required pressure complete.						
i	150mm dia flanged joints	2	No	487.10	2	nos.	974.00
ii	150mm dia near valves	2	No	259.12	2	nos.	518.00
		Grand Total					24,57,137.00
				say			24.57

MULTIMODAL LOGISTIC PARK, JOGIGHOPA									
CONSTRUCTION OF 150 KL CAPACITY GLSR									
DETAILED ESTIMATE									
Sl. No.	Description of Work	NO			L	B	D	Q	Unit
1	Earthwork excavation for structures in all types of soils up to 3.00 Mts depth below GL by manual means as per drawing and technical specifications including setting out, construction of shoring and bracing, removal of stumps and other deleterious material and disposal upto a lead of 50 m, dressing of sides and bottom and backfilling in trenches with excavated suitable material as per Technical Specification 305 MORD / 304 MORTH by Machanical means								
	A) Initial Lift 3.00m								
	3.0m below GL								
	Sump			1	3.00	11.12	3.00	100.08	
	Total							100.08	cum
2	Excavation in hard rock (blasting prohibited) with rock breakers including breaking rock, loading in tippers and disposal with initial lift of 3 mts and lead upto 1000 metres, trimming bottom and side slopes in accordance with requirements of lines, grades and cross- sections as per Technical Specification Clause 302.3.5 MORD / 301 MORTH , by Machanical means f								
	3.00m to 6.00								
	Sump			1	3.00	11.12	1.40	46.70	
	Total							46.70	cum
3	Plain cement concrete in (1:3:6) prop using 40 mm nominal size hard broken machine crushed granite metal as per SS including cost and conveyance of all materials, seignarage, sales tax and labour charges such as mixing concrete, laying, tamping, curing all operational, incidental charges etc., complete as per SS for finished item of work for building foundation concrete.								
	Sump			1	2.00	10.12	0.20	4.05	
	Total							4.05	cum

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5	Supplying, fitting and placing HYSD bar reinforcement in foundation complete as per drawings and technical specifications for Bars below 36 mm dia including over laps and wastage, where they are not welded BLD-CSTN-2-18								
i	Floor slab			12.14	Cu.m	100	kg/cu.m	1214	Kg
ii	side wall			67.16	Cu.m	125	kg/cu.m	8395	Kg
iii	columns			0.00	Cu.m	80	kg/cu.m	0	Kg
iv	Beams			0.00	Cu.m	125	kg/cu.m	0	Kg
v	Slab 150mm th			0.00	Cu.m	100	kg/cu.m	0	Kg
							Say	9609.85	Kg
6	Providing impervious coat with C.M. (1:3) 20 mm thick laid when the roof slab is green with water proof compound @ 1kg/bag of cement finished smooth with a floating coat of neat cement including cost & conveyance of all materials etc complete for finished item of work								
	Over roof			1	0.00	8.12		0.00	
							Total	0.00	sqm
7	Refilling with excavated soils including watering, tamping, consolidation and all labour charges etc complete								
	Quantity of excavation as per item no.1							146.78	
	Deduct sump volume			0	3.14	8.1	4.40	0.00	
								0.00	cum
8	Manufacturing, supply and erection of 600 mm width ladders with 50X50X6 mm MS angles 2 nos verticals and horizontals fixed at 25 cm c/c as per approved drawing and as directed by the departmental officers and painting both sides with anti corrosive paint two coats over one coat of primary coat including cost of all materials fabrication, welding transportation to site, all taxex and duties, fixing in position duly embodying in CC (1:1.5:3) prop., and all other incidental and operational charges etc., complete for finished item of work.								
				1	-0.35	7.77		-2.72	mts
	6.0kg per Rmt			-2.72	x	6.0		-16.32	kg
9	Painting to new walls with 2 coats of water proof cement paint of apporved brand and shade over a base coat of approved cement primer grade I making making 3 coats in all to give an even shade after thourughly brushing the surface to remove all dirt and remains of loose powdered materials, including cost and conveyance of all materials to work site and all operational, incidental, labour charges etc. complete for finished item of work as per SS 912								

	same as per item no.8							0.00	
	Vertical Side wall			1	16.24		1.00	16.24	
							Total	16.24	sqm
10	Supplying & fixing 600 x 600 mm dia C.I. Manhole frame & cover (medium weight)							2	nos.
11	Supplying & fixing of pre Cast R.C.C.ladders							2	nos.
12	Manufacture, supply and delivery of Cast Iron pipes and fittings (spls). Conforming to IS No.7181/1986, 5531/1988, 3950/1979 confirming to IS no.8794/1988 at site of work anywhere in A.P. including loading, unloading, transportation to site of work stack at site transit risk and package, including all taxes								
								6500.00	kgs
13	Manufacture, Supply and delivery of DI D/F Gate Valves (Soft Seated) Resilient seated soft sealing gate valves (Sluice valves) with body bonnet of ductile cast iron of grade GGG40/ SG 400/12 or equivalent grade as per I.S.3896-part2-1985 and subsequent revisions, wedge fully rubber lined with EPDM food grade quality and seals of NBR and the valves should be of vacuum tight and 100% leak proof with face to face dimensions as per BS5163-89/IS14846-2000/DIN 3202 F 4 including Electrostatic powder coating both inside and outside etc complete								
i	350 mm dia Sluice Valve			0	x	0		0.00	No
ii	150 mm dia Sluice Valve			2	x	1		1.00	No
14	Labour charges for lowering and keeping in position of C.I. Sluice valves, reflux valves and scour valves.								
i	350 mm dia Sluice Valve			1	x	0		0.00	No
ii	150mm dia Sluice Valve			1	x	1		1.00	No
15	Jointing the CI/DI Pipes, fittings and valves with flanged ends including cost of jointing materials such as bolts, nuts, rubber insertion, white lead and including filling with water with a water lead upto 500m and testing to required pressure complete.								
i	500 mm dia flanged joints			1	x	0		0.00	Nos
ii	150mm dia flanged joints			1	x	2		2.00	Nos
iii	350mm dia near valves			1	x	0		0.00	Nos
iv	150mm dia near valves			1	x	2		2.00	Nos
16	Supplying & fixing of 150mm dia Dia vents with bend at top							8	nos.



MULTI MODAL LOGISTIC PARK, JOGIGHOPA		
POTABLE WATER SUPPLY SYSTEM		
ABSTRACT ESTIMATE		
S.No	Components	Amount (Rs.)
<b>A</b>	<b>Potable Water Supply Network :-</b>	
1	Construction of 100 KL Clear Water Sump at WTP	2343168.00
2	Supply,Delivery and Erection of Submersible Pump sets from Sump to OHSR	448591.50
4	Providing HDPE PN 6 Gravity mains from Sump to blocks including valves, valve chambers etc. complete.	4952447.00
	<b>Sub Total - A</b>	<b>22095606.50</b>
<b>B</b>	<b>GST &amp; Other L.S provisions</b>	
5	Provision towards Works Contract GST @ 12%	2651473.00
6	Unforeseen items	252920.50
	<b>Sub Total - B</b>	<b>2904393.50</b>
	<b>Grand Total (A+B)</b>	<b>25000000.00</b>
	<b>Grand Total in Lakhs</b>	<b>250.00</b>

MULTI MODAL LOGISTIC PARK, JOGIGHOPA									
ABSTRACT ESTIMATE									
CWS TO OHSR									
									4.49Lakh
Sl No	Description	Nos			Quantity		Rate		Amount
1	Design, Manufacture, Supply, delivery, erection, testing and commisioning of pumping Machinery(ISI) with all accessories, appurtenances, surge protection devices , ultrasonic flowmeter on common delivery main at each pumping station, piping as per design requirement and as directed by the department on turn-key basis including trial run.								
1.a	7 HP Pump at CWS	1	x	2	7	Hp	32042.25	Each	448591.50
					Say Rs.				4.49Lakh

MULTI MODAL LOGISTIC PARK, JOGIGHOPA							
CONSTRUCTION OF 100 KL CAPACITY GLSR							
ABSTRACT ESTIMATE							
				Amount Rs. 23.43 lakhs			
Sl.No	Item Description	Quantity		Rate		Unit	Amount
1	Earthwork excavation for structures in all types of soils up to 3.00 Mts depth below GL by Mechanical means as per drawing and technical specifications including setting out, construction of shoring and bracing, removal of stumps and other deleterious material and disposal upto a lead of 50 m, dressing of sides and bottom and backfilling in trenches with excavated suitable material as per Technical Specification 305 MORD / 304 MORTH by Mechanical means						
2	Excavation in hard rock (blasting prohibited) with rock breakers including breaking rock, loading in tippers and disposal with initial lift of 3 mts and lead upto 1000 metres, trimming bottom and side slopes in accordance with requirements of lines, grades and cross- sections as per Technical Specification Clause 302.3.5 MORD / 301 MORTH , by Mechanical means						
	A) Extra lift over Initial Lift 2.00m	40.80	Cum	800.26	1	Cum	32,651.00
3	Plain cement concrete in (1:4:8) prop using 40 mm nominal size hard broken machine crushed granite metal as per SS including cost and conveyance of all materials, seignarage, sales tax and labour charges such as mixing concrete, laying, tamping, curin	3.50	Cum	4212.75	1	cum	14,745.00
4	Supply and placing of M30 grade Design Mix Concrete corresponding to IS 456 using WEIGH BATCHER / MIXER with 20mm size graded machine crushed hard granite metal (coarse aggregate) from approved quarry including cost and conveyance of all materials like cement, fine aggregate (sand) coarse aggregate, water etc., to site and including Seigniorage charges, sales & other taxes on all materials including all operational, incidental and labour charges such as weigh batching, machine mixing, laying concrete, curing etc.,complete but excluding cost of steel and its fabrication charges for finished item of work (APSS No. 402)with minimum cement content as per IS code from standard suppliers approved by the department including pumping, centering, shuttering, laying concrete, vibrating, curing etc. complete						
a	Floor Slab	10.50	Cum	10,729.36	1	cum	1,12,658.24
b	Sidewalls of Sump 375mm th	63.10	Cum	11,162.51	1	cum	7,04,354.00

d	Ring Beams	0.00	Cum	10,093.70	1	cum	-
e	Roof slab 125mm thick	0.00	Cum	9,832.70	1	Cum	-
5	Supply and Delivery of HYSD Fe 415 grade reinforcement steel including cost and conveyance to site and labour charges, cutting, bending, fabrication, binding of reinforcement including cost of binding wire etc. complete as per SS but Excluding all taxes	8923.90	Kg	59.97	1	Kg	5,35,172.00
6	Providing impervious coat with C.M. (1:3) 20 mm thick laid when the roof slab is green with water proof compound @ 1kg/bag of cement finished smooth with a floating coat of neat cement including cost & conveyance of all materials etc complete for finished	0.00	sqm	500.55	1	sqm	-
7	Manufacturing, supply and erection of 600 mm width ladders with 50X50X6 mm MS angles 2 nos verticals and horizontals fixed at 25 cm c/c as per approved drawing and as directed by the departmental officers and painting both sides with anti corrosive paint two coats over one coat of primary coat including cost of all materials fabrication, welding transportation to site, all taxex and duties, fixing in position duly embodying in CC (1:1.5:3) prop., and all other incidental and operational charges etc., complete for finished item of work.	-13.40	kg	71.58	1	mts	(959.00)

8	Painting to new walls with 1 coat of acrylic exterior plastic emulsion paint of approved brand and shade after thoroughly brushing the surface to remove all dirt and remains of loose powdered materials, including cost and conveyance of all materials to work site and all operational, incidental, labour charges etc. complete for finished item of work as per SS 911 to externalternal Walls with single coat of Polymer Plastic Emulsion paint	13.40	Sqm	144.45	1	sqm	1,936.00
9	Supplying & fixing 2 nos of 600 x 600 mm dia C.I. Manhole frame & cover (Minimum weight of each manhole with cover is 25kg) and Supplying & fixing of CI/D.I Double Swan neck ventilators (min. of 150mm dia.)	170.00	kg	87.06	1	Kg	14,800.00
10	Manufacture, supply and delivery of Centrifugally cast (spun) Ductile Iron D/F pipe and Fittings conforming to IS:9523 / 2000 having dimensions as per table. The rates mentioned here under are for fittings, zinc coated externally with inside mortar lining (with finishing as per class 13/IS 9523/2000) (ex-works) Excluding Transportation and all Taxes. Rates are ex-factory, excluding transportation and all taxes.. including loading, unloading, transportation to site of work.	6500.00	kgs	137.38	1	kg	8,92,991.00
11	Manufacture, Supply and delivery of DI D/F Gate Valves (Soft Seated) Resilient seated soft sealing gate valves (Sluice valves) with body bonnet of ductile cast iron of grade GGG40/ SG 400/12 or equivalent grade as per I.S.3896-part2-1985 and subsequent r						
ii	150 mm dia Sluice Valve	1	No	24198.65	1	nos.	24,199.00
12	Labour charges for lowering and keeping in position of C.I. Sluice valves, reflux valves and scour valves.						
ii	150mm dia Sluice Valve	1	Nos	329.23	2	nos.	329.00
13	Jointing the CI/DI Pipes, fittings and valves with flanged ends including cost of jointing materials such as bolts, nuts, rubber insertion, white lead and including filling with water with a water lead upto 500m and testing to required pressure complete.						
i	150mm dia flanged joints	2	No	487.10	2	nos.	974.00
ii	150mm dia near valves	2	No	259.12	2	nos.	518.00
		Grand Total					23,43,168.00
				say			<b>23.43</b>

MULTI MODAL LOGISTIC PARK, JOGIGHOPA									
CONSTRUCTION OF 100 KL CAPACITY GLSR									
DETAILED ESTIMATE									
Sl. No.	Description of Work	NO			L	B	D	Q	Unit
1	Earthwork excavation for structures in all types of soils up to 3.00 Mts depth below GL by manual means as per drawing and technical specifications including setting out, construction of shoring and bracing, removal of stumps and other deleterious material and disposal upto a lead of 50 m, dressing of sides and bottom and backfilling in trenches with excavated suitable material as per Technical Specification 305 MORD / 304 MORTH by Machanical means								
	A) Initial Lift 3.00m								
	3.0m below GL								
	Sump			1	3.00	9.70	3.00	87.30	
	Total							87.30	cum
2	Excavation in hard rock (blasting prohibited) with rock breakers including breaking rock, loading in tippers and disposal with initial lift of 3 mts and lead upto 1000 metres, trimming bottom and side slopes in accordance with requirements of lines, grades and cross- sections as per Technical Specification Clause 302.3.5 MORD / 301 MORTH , by Machanical means f								
	3.00m to 6.00								
	Sump			1	3.00	9.70	1.40	40.74	
	Total							40.74	cum
3	Plain cement concrete in (1:3:6) prop using 40 mm nominal size hard broken machine crushed granite metal as per SS including cost and conveyance of all materials, seignarage, sales tax and labour charges such as mixing concrete, laying, tamping, curing all operational, incidental charges etc., complete as per SS for finished item of work for building foundation concrete.								
	Sump			1	2.00	8.70	0.20	3.48	
	Total							3.48	cum

[illegible]

5	Supplying, fitting and placing HYSD bar reinforcement in foundation complete as per drawings and technical specifications for Bars below 36 mm dia including over laps and wastage, where they are not welded BLD-CSTN-2-18								
i	Floor slab			10.44	Cu.m	100	kg/cu.m	1044	Kg
ii	side wall			63.04	Cu.m	125	kg/cu.m	7880	Kg
iii	columns			0.00	Cu.m	80	kg/cu.m	0	Kg
iv	Beams			0.00	Cu.m	125	kg/cu.m	0	Kg
v	Slab 150mm th			0.00	Cu.m	100	kg/cu.m	0	Kg
							Say	8923.81	Kg
6	Providing impervious coat with C.M. (1:3) 20 mm thick laid when the roof slab is green with water proof compound @ 1kg/bag of cement finished smooth with a floating coat of neat cement including cost & conveyance of all materials etc complete for finished item of work								
	Over roof			1	0.00	6.70		0.00	
							Total	0.00	sqm
7	Refilling with excavated soils including watering, tamping, consolidation and all labour charges etc complete								
	Quantity of excavation as per item no.1							128.04	
	Deduct sump volume			0	3.14	6.7	4.40	0.00	
								0.00	cum
8	Manufacturing, supply and erection of 600 mm width ladders with 50X50X6 mm MS angles 2 nos verticals and horizontals fixed at 25 cm c/c as per approved drawing and as directed by the departmental officers and painting both sides with anti corrosive paint two coats over one coat of primary coat including cost of all materials fabrication, welding transportation to site, all taxex and duties, fixing in position duly embodying in CC (1:1.5:3) prop., and all other incidental and operational charges etc., complete for finished item of work.								
				1	-0.35	6.35		-2.22	mts
	6.0kg per Rmt			-2.22	x	6.0		-13.34	kg



9	Painting to new walls with 2 coats of water proof cement paint of apporved brand and shade over a base coat of approved cement primer grade I making making 3 coats in all to give an even shade after thourughly brushing the surface to remove all dirt and remains of loose powdered materials, including cost and conveyance of all materials to work site and all operational, incidental, labour charges etc. complete for finished item of work as per SS 912								
	same as per item no.8							0.00	
	Vertical Side wall			1	13.40		1.00	13.40	
							Total	13.40	sqm
10	Supplying & fixing 600 x 600 mm dia C.I. Manhole frame & cover (medium weight)							2 nos.	
11	Supplying & fixing of pre Cast R.C.C.ladders							2 nos.	
12	Manufacture, supply and delivery of Cast Iron pipes and fittings (spl)s). Conforming to IS No.7181/1986, 5531/1988, 3950/1979 confirming to IS no.8794/1988 at site of work anywhere in A.P. including loading, unloading, transportation to site of work stack at site transit risk and package, including all taxes								
								6500.00	kgs
13	Manufacture, Supply and delivery of DI D/F Gate Valves (Soft Seated) Resilient seated soft sealing gate valves (Sluice valves) with body bonnet of ductile cast iron of grade GGG40/ SG 400/12 or equivalent grade as per I.S.3896-part2-1985 and subsequent revisions, wedge fully rubber lined with EPDM food grade quality and seals of NBR and the valves should be of vacuum tight and 100% leak proof with face to face dimensions as per BS5163-89/IS14846-2000/DIN 3202 F 4 including Electrostatic powder coating both inside and outside etc complete								
ii	150 mm dia Sluice Valve			2	x	1		1.00	No
14	Labour charges for lowering and keeping in position of C.I. Sluice valves, reflux valves and scour valves.								
ii	150mm dia Sluice Valve			1	x	1		1.00	No
15	Jointing the CI/DI Pipes, fittings and valves with flanged ends including cost of jointing materials such as bolts, nuts, rubber insertion, white lead and including filling with water with a water lead upto 500m and testing to required pressure complete.								
i	500 mm dia flanged joints			1	x	0		0.00	Nos

ii	150mm dia flanged joints			1	x	2		2.00	Nos
iii	350mm dia near valves			1	x	0		0.00	Nos
iv	150mm dia near valves			1	x	2		2.00	Nos
16	Supplying & fixing of 150mm Dia vents with bend at top							8	nos.

# MULTI MODAL LOGISTIC PARK, JOGIGHOPA

## PROPOSED POTABLE WATER SUPPLY SYSTEM

### Abstract Estimate for 600KL OHSR

Sl.No	Description of Item	Quantity		Rate		Amount	
1)	Construction of 250 KL capacity OHSR with a staging of 20m at Chandolu with VRCC M30 mix including fixtures mentioned below	600000	Litres	23.92	1Litre	14351400	
	1) The above rates are arrived with base rate of Cement Rs.3882/- per MT & Steel for						
2)	Rs.41,300/- per MT for the month of OCT-2018						
3)	2) All concrete components shall be designed with M30 Design Mix proportion.						
4)	3) For intermediate capacities proportional rates shall be adopted.						
5)	4) The foundations shall be designed for Annular Raft Footings.						
6)	The above rates are applicable for Elevated Level Services Reservoirs / OHSRs for						
7)	SBC of 15 T/Sqm.						
8)	a) For every decrease of 2.50 T/Sqm of SBC, the rate shall be increased by 2.5% on						
9)	basic rate .						
10)	b) For every increase of 2.5 T/Sqm of SBC, the rate shall be decreased by 1.0% on						
	basic rate up to 20 T/Sqm.						
	c) For SBC below 10T/sqm , solid raft shall be provided and for solid raft the rate						
	shall be increased by 10% on basic rates						
	5) For staging less than 15 m, the rate shall be decreased by Rs.0.05 paise on basic						
	rate per litre per every metre decrease in staging.						
	6) For staging above 15 m, the rate shall be increased by Rs.0.10 paise on basic rate						
	per litre per every metre additional staging.						
	7) The above rates shall be increased / decreased due to increase/decrease in the						
	cost of cement by						
	Basic rate x (Rc-5500)/5500 x 0.07						
	Rc = Rate of Cement (Rs per MT) at the time of preparation of estimate.						
	8) The above rates shall be increased / decreased due to increase/decrease in the						
	cost of Steel by						
	Basic rate x (Rs-33000)/33000 x 0.2						
	Rs = Rate of Steel (Rs.per MT) at the time of preparation of estimate.						
	The above formula applicable only for preparation of estimate. The price adjustment						
	shall be adopted on the actual consumption of Steel and Cement.						

9 a) Rate inclusive of three coats of epoxy paint Food Grade of best quality to inner surface of the Reservoir including roof.						
b) Rate inclusive of 2 coats of weather proof emulsion painting for external surfaces,						
lettering, all required fixtures, Pipes,Pipe specials, valves of DI material, Valve chambers etc., for pipe connections including cost of pipes,specials and valves as per departmental directions and drawings.						
10) The above rates adopted for a wind pressure upto "250 kg/sq m". For every 100 kg/sqm decrease in wind pressure, the rate shall be decreased by 5%						
11.a)The Basic rate is adopted by considering the design for Seismic forces for Zone-II only of seismic zones.						
b) The basic rates shall be increased by 15 % for Zone-III of seismic zones.						
12. The ELSR/OHSR shall be designed with minimum of two rows of columns for capacities above 500 KL & upto 1000KL.						
13. The ELSR/OHSR shall be designed with minimum of three rows of columns for capacities above 1000KL.						
14) The basic rate is inclusive of following Fixtures						
i) Pipe connections & Specials with D.I materials						
a) All pipe connections for Inlet, Out let (2 Nos), Over Flow, Scour pipes shall be provided with D/F DI material.						
b) The Valves for above pipe connections also shall be of DI material of PN 16						
c) All specials such as Bends,Tees, Reducers, Duckfoot Bends,Bell mouths etc., shall be of DI material.						
II) The sizes of the verticals for ELSR/OHSR shall be:						
a) For 500 KL to 750 KI ELSRs						
Inlet Pipe - 300mm dia.						
Out let Pipe - 350mm dia and DI Valves 02 Nos						
Over Flow pipe - 350m dia						
Scour Pipe - 200mm dia						
b) For 800 KL to 1500 KI ELSRs						
Inlet Pipe - 400mm dia.						
Out let Pipe - 450mm dia and DI Valves 02 Nos						
Over Flow pipe - 450m dia						
Scour Pipe - 200mm dia						
c) For above 1500 KL to 2500 KI ELSRs						
Inlet Pipe - 400mm dia.						
Out let Pipe - 500mm dia and DI Valves 02 Nos						
Over Flow pipe - 500m dia						
Scour Pipe - 200mm dia						
iii) Manhole Frames & Covers						
All man hole Frames & Covers shall be made of CI/DI materials with min. size of 0.60mX 0.60m - For Roof & Valve Chambers.						
iv) CI/D.I Double Swan neck ventilators (min.of 150mm dia) shall be provided in top dome and slab with mosquito/fly proof nets - 4Nos.						
v) RCC phenial ventilator with fly/bird protection with GI mesh - 1 No.						
vi) RCC precast ladders of 0.60 m width - 2 Nos.						
vii) RCC dog legged stair case of 1.00 m flight width and 1.20 m landing width R.C.C hand railing of 1.0 m height – 1 No						
viii)The staircase shall be enclosed with brick masonry walls on three side and						

	collapsible MS gate on front side up to 1						
	st						
	brace level, to prevent unauthorized entry.						
	ix) Construction of R.C.C valve chambers as per Standard Drawings with RCC cover						
	slab fixed with CI/DI manhole Frame & Cover with lock and Key arrangement. The						
	Mix shall not be less than VRCC M 20 grade with 150mm thick side walls, 150mm						
	thick top slab, 150mm thick base slab over base course of 100mm thick (1:4:8) prop.						
	x) Balcony of 1.00 m width at floor slab level / middle ring beam level by using						
	Stainless Steel pipe of grade 304 hand railing up to 1.20 m height, with top railing of						
	40mm dia pipe & middle railing of 25mm dia and verticals with 40mm dia at an						
	interval not more than of 1.00m c/c.						
	xi) Water Level Indicator of reputed make – Digital type (1 No) and Conventional type						
	(1 No)						
	xii) Lightening Arrestor with all its accessories complete including earthing, with						
	relevant IS Codes - 1 No.						
						14351400	
					Say Rs.	143.51	Lakhs

Cost for 10 Mts ELSR Rates										
MULTI MODAL LOGISTIC PARK, JOGIGHOPA										
	Cement	Steel							CP & OH @	13.615%
SSR Rate	3882	41300								
Current Rate	3900	42000						Original Staging		15
Difference in Cost	18	700						Proposed Staging		10
Coefficient Factor	0.07	0.2						Variation in Staging		-5
Staging Variation										
For Wind Pressure Variation Variation from 250 to 150	0%									
for staging above 15m the rate shall be increased by 10 Paise per each meter	0.1									
for staging below 15m the rate shall be decreased by 5 Paise per each meter	0.05									
Seismic zone -15%	15%									
Increase/Decrease in Cost of Basic Rate										
	Basic Cost for 20mts Staging	Variation in cost for 10 mts Staging	Cement	Steel	Wind	Seismic-III	Revised Basic Cost	CP & OH @ 13.615%	Revised Cost for 10 mts Staging	
10KL	22.275	-0.250	0.01	0.08	0.00	3.34	25.45	3.47	28.91	
20KL	22.211	-0.250	0.01	0.08	0.00	3.33	25.37	3.46	28.83	
30KL	22.146	-0.250	0.01	0.08	0.00	3.32	25.30	3.45	28.75	
40KL	22.082	-0.250	0.01	0.08	0.00	3.31	25.23	3.43	28.66	
50KL	22.017	-0.250	0.01	0.08	0.00	3.30	25.15	3.42	28.58	
60KL	21.952	-0.250	0.01	0.07	0.00	3.29	25.08	3.41	28.49	
70KL	21.888	-0.250	0.01	0.07	0.00	3.28	25.00	3.40	28.41	
80KL	21.823	-0.250	0.01	0.07	0.00	3.27	24.93	3.39	28.32	
90KL	21.759	-0.250	0.01	0.07	0.00	3.26	24.85	3.38	28.24	
100KL	21.694	-0.250	0.01	0.07	0.00	3.25	24.78	3.37	28.15	
110KL	21.629	-0.250	0.01	0.07	0.00	3.24	24.70	3.36	28.07	
120KL	21.565	-0.250	0.01	0.07	0.00	3.24	24.63	3.35	27.98	
130KL	21.500	-0.250	0.01	0.07	0.00	3.23	24.56	3.34	27.90	
140KL	21.436	-0.250	0.01	0.07	0.00	3.22	24.48	3.33	27.81	
150KL	21.371	-0.250	0.01	0.07	0.00	3.21	24.41	3.32	27.73	
160KL	21.306	-0.250	0.01	0.07	0.00	3.20	24.33	3.31	27.64	
170KL	21.242	-0.250	0.01	0.07	0.00	3.19	24.26	3.30	27.56	
180KL	21.177	-0.250	0.01	0.07	0.00	3.18	24.18	3.29	27.48	
190KL	21.113	-0.250	0.01	0.07	0.00	3.17	24.11	3.28	27.39	
200KL	21.048	-0.250	0.01	0.07	0.00	3.16	24.03	3.27	27.31	
240KL	20.790	-0.250	0.01	0.07	0.00	3.12	23.73	3.23	26.97	
250KL	20.725	-0.250	0.01	0.07	0.00	3.11	23.66	3.22	26.88	
260KL	20.660	-0.250	0.01	0.07	0.00	3.10	23.59	3.21	26.80	
270KL	20.596	-0.250	0.01	0.07	0.00	3.09	23.51	3.20	26.71	
300KL	20.402	-0.250	0.01	0.07	0.00	3.06	23.29	3.17	26.46	
310KL	20.337	-0.250	0.01	0.07	0.00	3.05	23.21	3.16	26.38	
340KL	20.144	-0.250	0.01	0.07	0.00	3.02	22.99	3.13	26.12	
350KL	20.079	-0.250	0.01	0.07	0.00	3.01	22.92	3.12	26.04	
380KL	19.885	-0.250	0.01	0.07	0.00	2.98	22.69	3.09	25.78	
400KL	19.756	-0.250	0.01	0.07	0.00	2.96	22.54	3.07	25.61	
450KL	19.433	-0.250	0.01	0.07	0.00	2.92	22.17	3.02	25.19	
500KL	19.110	-0.250	0.006	0.065	0.000	2.867	21.798	2.968	24.766	
1000KL	15.880	-0.250	0.005	0.054	0.000	2.382	18.071	2.460	20.531	
600KL	18.464	-0.250	0.006	0.063	0.000	2.770	21.053	2.866	23.919	
650KL	18.141	-0.250	0.006	0.061	0.000	2.721	20.679	2.815	23.494	
700KL	17.818	-0.250	0.006	0.06	0.000	2.673	20.307	2.765	23.072	
750KL	17.495	-0.250	0.006	0.059	0.000	2.624	19.934	2.714	22.648	
800KL	17.172	-0.250	0.005	0.058	0.000	2.576	19.561	2.663	22.224	
900KL	16.526	-0.250	0.005	0.056	0.000	2.479	18.816	2.562	21.378	
1000KL	15.880	-0.250	0.005	0.054	0.000	2.382	18.071	2.460	20.531	
1500KL	14.310	-0.250	0.005	0.049	0.000	2.147	16.261	2.214	18.475	
1100KL	15.566	-0.250	0.005	0.053	0.000	2.335	17.709	2.411	20.120	
1200KL	15.252	-0.250	0.005	0.052	0.000	2.288	17.347	2.362	19.709	
1300KL	14.938	-0.250	0.005	0.051	0.000	2.241	16.985	2.313	19.298	
1400KL	14.624	-0.250	0.005	0.05	0.000	2.194	16.623	2.263	18.886	
1550KL	14.153	-0.250	0.005	0.048	0.000	2.123	16.079	2.189	18.268	
1550KL	14.153	-0.250	0.005	0.048	0.000	2.123	16.079	2.189	18.268	
2000KL	12.460	-0.250	0.004	0.042	0.000	1.869	14.125	1.923	16.048	

**MULTI MODAL LOGISTIC PARK, JOGIGHOPA**

PROPOSED POTABLE WATER SUPPLY SYSTEM												
ABSTRACT ESTIMATION												
S. No	Description of Item	No			L	B	D	Quantity	Rate	Per	Amount	
	<b>Total EWE Quantity</b>											
	110 mm dia HDPE 6Kg/Cm <sup>2</sup> pipe	1	x	1	3140.00	0.75	1.10	2590.50				
	125 mm dia HDPE 6Kg/Cm <sup>2</sup> pipe	1	x	1	466.00	0.75	1.20	419.40				
	140 mm dia HDPE 6Kg/Cm <sup>2</sup> pipe	1	x	1	92.00	0.75	1.40	96.60				
	160 mm dia HDPE 6Kg/Cm <sup>2</sup> pipe	1	x	1	164.00	0.70	1.60	183.68				
	180 mm dia HDPE 6Kg/Cm <sup>2</sup> pipe	1	x	1	295.00	0.70	1.80	371.70				
	200 mm dia DI K7 pipe	1	x	1	10.00	0.75	1.20	9.00				
	Total EWE Qty				<b>4167.00</b>	<b>Rmt</b>		<b>3670.88</b>	<b>Cum</b>			
1	Cutting open BT road surface as well as asphalt concrete including water bound macadam and stacking of excavated materials for pipe line trench work. as directed by the departmental officers.											
	63 mm dia HDPE 6Kg/Cm2 pipe	1	x	1	0.00	0.60	0.10	0.00				
	75 mm dia HDPE 6Kg/Cm2 pipe	1	x	1	0.00	0.75	0.10	0.00				
	90 mm dia HDPE 6Kg/Cm2 pipe	1	x	1	0.00	0.75	0.10	0.00				
	110 mm dia HDPE 6Kg/Cm2 pipe	1	x	1	320.00	0.75	0.10	24.00				
	125 mm dia HDPE 6Kg/Cm2 pipe	1	x	1	50.00	0.75	0.10	3.75				
	140 mm dia HDPE 6Kg/Cm2 pipe	1	x	1	10.00	0.75	0.10	0.75				
	160 mm dia HDPE 6Kg/Cm2 pipe	1	x	1	20.00	0.70	0.10	1.40				
	180 mm dia HDPE 6Kg/Cm2 pipe	1	x	1	30.00	0.70	0.10	2.10				
	200 mm dia DI K7 pipe	1	x	1	10.00	0.75	0.10	0.75				
	BT cutting Qty							<b>320.00</b>	<b>Sqm</b>	<b>121.97</b>	<b>1</b>	<b>Sqm</b>
2	Cutting open C.C. road surface including stacking of excavated materials for pipe line trench work. as directed by the departmental officers.											
	110 mm dia HDPE 6Kg/Cm2 pipe	1	x	1	1260.00	0.75	0.15	141.75				
	125 mm dia HDPE 6Kg/Cm2 pipe	1	x	1	195.00	0.75	0.15	21.94				
	140 mm dia HDPE 6Kg/Cm2 pipe	1	x	1	45.00	0.75	0.15	5.06				
	160 mm dia HDPE 6Kg/Cm2 pipe	1	x	1	75.00	0.70	0.15	7.88				
	180 mm dia HDPE 6Kg/Cm2 pipe	1	x	1	120.00	0.70	0.15	96.60				
	200 mm dia DI K7 pipe	1	x	1	15.00	0.75	0.15	1.69				
	CC cutting Qty							<b>275.00</b>	<b>Cum</b>	<b>3723.63</b>	<b>1</b>	<b>Cum</b>
3	Cutting open water bound macadam road including soiling for pipe line trench work. as directed by the departmental officers.											
	110 mm dia HDPE 6Kg/Cm2 pipe	1	x	1	160.00	0.75	0.15	18.00				
	125 mm dia HDPE 6Kg/Cm2 pipe	1	x	1	25.00	0.75	0.15	2.81				
	140 mm dia HDPE 6Kg/Cm2 pipe	1	x	1	5.00	0.75	0.15	0.56				
	160 mm dia HDPE 6Kg/Cm2 pipe	1	x	1	10.00	0.70	0.15	1.05				
	180 mm dia HDPE 6Kg/Cm2 pipe	1	x	1	15.00	0.70	0.15	1.58				
	200 mm dia DI K7 pipe	1	x	1	5.00	0.75	0.15	0.56				
	WBM cutting Qty							<b>24.60</b>	<b>Cum</b>	<b>414.76</b>	<b>1</b>	<b>Cum</b>
4	RBR-FNDN-1- (i-B) - In ordinary soils, by Mechanical means Earthwork excavation in all kinds of soil for Pipe line trenches as per drawings and technical specifications including setting out, construction of shoring and bracing, removal of stumps and other deleterious material , dressing of sides and bottom as per Technical Specification 304 MORTH and as directed by the departmental officer including protecting the existing utility services wherever it is possible during the execution and taking all precautionary measures in the restricted areas for laying sewer/water lines including diversion of traffic and backfilling in trenches with excavated suitable material and disposal of remaining earth upto a lead of 50 m, including all incidental and operational charges etc., complete for Pipe Lines by mechanical means.											
	EWE Quantity	1	x	1	3670.88	70%		<b>2569.60</b>	<b>Cum</b>	<b>100.80</b>	<b>1</b>	<b>Cum</b>
5	RBR-FNDN-1- (i-A) In ordinary soils, by Manual means Earthwork excavation in all kinds of soil for Pipe line trenches as per drawings and technical specifications including setting out, construction of shoring and bracing, removal of stumps and other deleterious material , dressing of sides and bottom as per Technical Specification 304 MORTH and as directed by the departmental officer including protecting the existing utility services wherever it is possible during the execution and taking all precautionary measures in the restricted areas for laying sewer/water lines including diversion of traffic and backfilling in trenches with excavated suitable material and disposal of remaining earth upto a lead of 50 m, including all incidental and operational charges etc., complete for Pipe Lines by manual means.											
	EWE Quantity	1	x	1	3670.88	30%		<b>1101.30</b>	<b>Cum</b>	<b>365.12</b>	<b>1</b>	<b>Cum</b>
6	BLD-CSTN-2-5 - (13): Earth work excavation for foundations and depositing on bank for all lifts and with an initial lead of 10m including all operational, incidental, labour charges such as shoring ,sheeting, planking, strutting, etc. complete for finished item of work including seigniorage excluding dewatering charges etc as per SS - 20 B (APSS 308). <b>Ordinary rock (not requiring blasting)-Manual Means-Upto 3 m depth</b>											
	% of the EWE Quantity	1	x	1	3670.88	10%		<b>367.09</b>	<b>Cum</b>	<b>127.04</b>	<b>1</b>	<b>Cum</b>
7	RBR-FNDN-1- (iv) - In hard rock blasting prohibited: Excavation in Hard rock (blasting prohibited) Upto 3 m depth including 1.5 m depth in hard rock : Earthwork excavation in hard rock such as sheet rock and boulders in habitant areas where conventional blasting can not be done for pipe line trenches, including all incidental and operational charges etc., complete - Mechanical Means											
	% of the EWE Quantity	1	x	1	3670.88	10%		<b>367.09</b>	<b>Cum</b>	<b>745.79</b>	<b>1</b>	<b>Cum</b>
6	PHE-BHLW-26; Barricading, hoarding, lighting and watching etc., for water supply and sewerage works for trenches of depths upto 3'-0" (2 Meter) below G.L											
	for main roads in habitation area	1	x	1	208.35			208.40	<b>Rmt</b>	<b>169.94</b>	<b>1</b>	<b>Rmt</b>

[illegible]



[illegible]

MULTI MODAL LOGISTIC PARK, JOGIGHOPA		
PROPOSED RECYCLED WATER SYSTEM		
ABSTRACT ESTIMATE		
S.No	Components	Amount (Rs.)
<b>A</b>	<b>Recycle Water Network :-</b>	
1	Supply,Delivery and Erection of Submersible Pump sets from Sump to Plots (MMLP)	320422.50
2	Construction of 50 KL Recycled Water Sump at STP	2202309.00
3	Providing HDPE PN-10 Pumping mains from Sump to Plots (MMLP) including valves, valve chambers etc. complete.	4371704.00
	<b>Sub Total - A</b>	<b>6894435.50</b>
<b>B</b>	<b>GST &amp; Other L.S provisions</b>	
4	Provision towards Works Contract GST @ 12%	827332.00
5	Unforeseen items	278232.50
	<b>Sub Total - B</b>	<b>1105564.50</b>
	<b>Grand Total (A+B)</b>	<b>8000000.00</b>
	<b>Grand Total in Lakhs</b>	<b>80.00</b>

MULTI MODAL LOGISTIC PARK, JOGIGHOPA									
ABSTRACT ESTIMATE									
CWS TO PLOTS									
									<b>3.20Lakh</b>
SI No	Description	Nos			Quantity		Rate		Amount
1	Design, Manufacture, Supply, delivery, erection, testing and commisioning of pumping Machinery(ISI) with all accessories, appurtenances, surge protection devices , ultrasonic flowmeter on common delivery main at each pumping station, piping as per design requirement and as directed by the department on turn-key basis including trial run.								
1.a	5 HP Pump at CWS	1	x	2	5	Hp	32042.25	Each	320422.50
									320422.50
				Say Rs.					<b>3.20Lakh</b>

**MULTI MODAL LOGISTIC PARK, JOGIGHOPA**

**CONSTRUCTION OF 50 KL CAPACITY GLSR**

**ABSTRACT ESTIMATE**

				Amount Rs. 22.02 lakhs			
Sl.No	Item Description	Quantity		Rate		Unit	Amount
1	Earthwork excavation for structures in all types of soils up to 3.00 Mts depth below GL by Mechanical means as per drawing and technical specifications including setting out, construction of shoring and bracing, removal of stumps and other deleterious material and disposal upto a lead of 50 m, dressing of sides and bottom and backfilling in trenches with excavated suitable material as per Technical Specification 305 MORD / 304 MORTH by Mechanical means						
	A) Initial Lift 3.00m	71.60	Cum	100.80	1	Cum	7,217.00
2	Excavation in hard rock (blasting prohibited) with rock breakers including breaking rock, loading in tippers and disposal with initial lift of 3 mts and lead upto 1000 metres, trimming bottom and side slopes in accordance with requirements of lines, grades and cross- sections as per Technical Specification Clause 302.3.5 MORD / 301 MORTH , by Machanical means						
	A) Extra lift over Initial Lift 2.00m	33.40	Cum	800.26	1	Cum	26,729.00
3	Plain cement concrete in (1:4:8) prop using 40 mm nominal size hard broken machine crushed granite metal as per SS including cost and conveyance of all materials, seignarage, sales tax and labour charges such as mixing concrete, laying, tamping, curin	2.80	Cum	4212.75	1	cum	11,796.00

4	Supply and placing of M30 grade Design Mix Concrete corresponding to IS 456 using WEIGH BATCHER / MIXER with 20mm size graded machine crushed hard granite metal (coarse aggregate) from approved quarry including cost and conveyance of all materials like cement, fine aggregate (sand) coarse aggregate, water etc., to site and including Seigniorage charges, sales & other taxes on all materials including all operational, incidental and labour charges such as weigh batching, machine mixing, laying concrete, curing etc., complete but excluding cost of steel and its fabrication charges for finished item of work (APSS No. 402) with minimum cement content as per IS code from standard suppliers approved by the department including pumping, centering, shuttering, laying concrete, vibrating, curing etc. complete						
a	Floor Slab	8.40	Cum	10,729.36	1	cum	90,126.59
b	Sidewalls of Sump 375mm th	58.00	Cum	11,162.51	1	cum	6,47,426.00
d	Ring Beams	0.00	Cum	10,093.70	1	cum	-
e	Roof slab 125mm thick	0.00	Cum	9,832.70	1	Cum	-
5	Supply and Delivery of HYSD Fe 415 grade reinforcement steel including cost and conveyance to site and labour charges, cutting, bending, fabrication, binding of reinforcement including cost of binding wire etc. complete as per SS but Excluding all taxes	8078.40	Kg	59.97	1	Kg	4,84,467.00
6	Providing impervious coat with C.M. (1:3) 20 mm thick laid when the roof slab is green with water proof compound @ 1kg/bag of cement finished smooth with a floating coat of neat cement including cost & conveyance of all materials etc complete for finished	0.00	sqm	500.55	1	sqm	-
7	Manufacturing, supply and erection of 600 mm width ladders with 50X50X6 mm MS angles 2 nos verticals and horizontals fixed at 25 cm c/c as per approved drawing and as directed by the departmental officers and painting both sides with anti corrosive paint two coats over one coat of primary coat including cost of all materials fabrication, welding transportation to site, all taxex and duties, fixing in position duly embodying in CC (1:1.5:3) prop., and all other incidental and operational charges etc., complete for finished item of work.	-9.70	kg	71.58	1	mts	(694.00)

8	Painting to new walls with 1 coat of acrylic exterior plastic emulsion paint of approved brand and shade after thoroughly brushing the surface to remove all dirt and remains of loose powdered materials, including cost and conveyance of all materials to work site and all operational, incidental, labour charges etc. complete for finished item of work as per SS 911 to externalternal Walls with single coat of Polymer Plastic Emulsion paint	9.90	Sqm	144.45	1	sqm	1,430.00
9	Supplying & fixing 2 nos of 600 x 600 mm dia C.I. Manhole frame & cover (Minimum weight of each manhole with cover is 25kg) and Supplying & fixing of CI/D.I Double Swan neck ventilators (min. of 150mm dia.)	170.00	kg	87.06	1	Kg	14,800.00
10	Manufacture, supply and delivery of Centrifugally cast (spun) Ductile Iron D/F pipe and Fittings conforming to IS:9523 / 2000 having dimensions as per table. The rates mentioned here under are for fittings, zinc coated externally with inside mortar lining (with finishing as per class 13/IS 9523/2000) ( ex-works) Excluding Transportation and all Taxes. Rates are ex-factory, excluding transportation and all taxes.. including loading, unloading, transportation to site of work.	6500.00	kgs	137.38	1	kg	8,92,991.00
11	Manufacture, Supply and delivery of DI D/F Gate Valves (Soft Seated) Resilient seated soft sealing gate valves (Sluice valves) with body bonnet of ductile cast iron of grade GGG40/ SG 400/12 or equivalent grade as per I.S.3896-part2-1985 and subsequent r						
ii	150 mm dia Sluice Valve	1	No	24198.65	1	nos.	24,199.00
12	Labour charges for lowering and keeping in position of C.I. Sluice valves, reflux valves and scour valves.						
ii	150mm dia Sluice Valve	1	Nos	329.23	2	nos.	329.00
13	Jointing the CI/DI Pipes, fittings and valves with flanged ends including cost of jointing materials such as bolts, nuts, rubber insertion, white lead and including filling with water with a water lead upto 500m and testing to required pressure complete.						
i	150mm dia flanged joints	2	No	487.10	2	nos.	974.00
ii	150mm dia near valves	2	No	259.12	2	nos.	518.00
		Grand Total					22,02,309.00
				say			22.02

MULTI MODAL LOGISTIC PARK, JOGIGHOPA									
CONSTRUCTION OF 50 KL CAPACITY GLSR									
DETAILED ESTIMATE									
Sl. No.	Description of Work	NO			L	B	D	Q	Unit
1	Earthwork excavation for structures in all types of soils up to 3.00 Mts depth below GL by manual means as per drawing and technical specifications including setting out, construction of shoring and bracing, removal of stumps and other deleterious material and disposal upto a lead of 50 m, dressing of sides and bottom and backfilling in trenches with excavated suitable material as per Technical Specification 305 MORD / 304 MORTH by Machanical means								
	A) Initial Lift 3.00m								
	3.0m below GL								
	Sump			1	3.00	7.95	3.00	71.55	
	Total							71.55	cum
2	Excavation in hard rock (blasting prohibited) with rock breakers including breaking rock, loading in tippers and disposal with initial lift of 3 mts and lead upto 1000 metres, trimming bottom and side slopes in accordance with requirements of lines, grades and cross- sections as per Technical Specification Clause 302.3.5 MORD / 301 MORTH , by Machanical means f								
	3.00m to 6.00								
	Sump			1	3.00	7.95	1.40	33.39	
	Total							33.39	cum
3	Plain cement concrete in (1:3:6) prop using 40 mm nominal size hard broken machine crushed granite metal as per SS including cost and conveyance of all materials, seignarage, sales tax and labour charges such as mixing concrete, laying, tamping, curing all operational, incidental charges etc., complete as per SS for finished item of work for building foundation concrete.								
	Sump			1	2.00	6.95	0.20	2.78	
	Total							2.78	cum





5	Supplying, fitting and placing HYSD bar reinforcement in foundation complete as per drawings and technical specifications for Bars below 36 mm dia including over laps and wastage, where they are not welded BLD-CSTN-2-18								
i	Floor slab			8.34	Cu.m	100	kg/cu.m	834	Kg
ii	side wall			57.95	Cu.m	125	kg/cu.m	7244	Kg
iii	columns			0.00	Cu.m	80	kg/cu.m	0	Kg
iv	Beams			0.00	Cu.m	125	kg/cu.m	0	Kg
v	Slab 150mm th			0.00	Cu.m	100	kg/cu.m	0	Kg
							Say	8078.34	Kg
6	Providing impervious coat with C.M. (1:3) 20 mm thick laid when the roof slab is green with water proof compound @ 1kg/bag of cement finished smooth with a floating coat of neat cement including cost & conveyance of all materials etc complete for finished item of work								
	Over roof			1	0.00	4.95		0.00	
							Total	0.00	sqm
7	Refilling with excavated soils including watering, tamping, consolidation and all labour charges etc complete								
	Quantity of excavation as per item no.1							104.94	
	Deduct sump volume			0	3.14	5.0	4.40	0.00	
								0.00	cum
8	Manufacturing, supply and erection of 600 mm width ladders with 50X50X6 mm MS angles 2 nos verticals and horizontals fixed at 25 cm c/c as per approved drawing and as directed by the departmental officers and painting both sides with anti corrosive paint two coats over one coat of primary coat including cost of all materials fabrication, welding transportation to site, all taxex and duties, fixing in position duly embodying in CC (1:1.5:3) prop., and all other incidental and operational charges etc., complete for finished item of work.								
				1	-0.35	4.60		-1.61	mts
	6.0kg per Rmt			-1.61	x	6.0		-9.66	kg
9	Painting to new walls with 2 coats of water proof cement paint of apporved brand and shade over a base coat of approved cement primer grade I making making 3 coats in all to give an even shade after thourughly brushing the surface to remove all dirt and remains of loose powdered materials, including cost and conveyance of all materials to work site and all operational, incidental, labour charges etc. complete for finished item of work as per SS 912								

	same as per item no.8							0.00	
	Vertical Side wall			1	9.90		1.00	9.90	
							Total	9.90	sqm
10	Supplying & fixing 600 x 600 mm dia C.I. Manhole frame & cover (medium weight)							2	nos.
11	Supplying & fixing of pre Cast R.C.C.ladders							2	nos.
12	Manufacture, supply and delivery of Cast Iron pipes and fittings (spls). Conforming to IS No.7181/1986, 5531/1988, 3950/1979 confirming to IS no.8794/1988 at site of work anywhere in A.P. including loading, unloading, transportation to site of work stack at site transit risk and package, including all taxes								
								6500.00	kgs
13	Manufacture, Supply and delivery of DI D/F Gate Valves (Soft Seated) Resilient seated soft sealing gate valves (Sluice valves) with body bonnet of ductile cast iron of grade GGG40/ SG 400/12 or equivalent grade as per I.S.3896-part2-1985 and subsequent revisions, wedge fully rubber lined with EPDM food grade quality and seals of NBR and the valves should be of vacuum tight and 100% leak proof with face to face dimensions as per BS5163-89/IS14846-2000/DIN 3202 F 4 including Electrostatic powder coating both inside and outside etc complete								
i	350 mm dia Sluice Valve			0	x	0		0.00	No
ii	150 mm dia Sluice Valve			2	x	1		1.00	No
14	Labour charges for lowering and keeping in position of C.I. Sluice valves, reflux valves and scour valves.								
i	350 mm dia Sluice Valve			1	x	0		0.00	No
ii	150mm dia Sluice Valve			1	x	1		1.00	No
15	Jointing the CI/DI Pipes, fittings and valves with flanged ends including cost of jointing materials such as bolts, nuts, rubber insertion, white lead and including filling with water with a water lead upto 500m and testing to required pressure complete.								
i	500 mm dia flanged joints			1	x	0		0.00	Nos
ii	150mm dia flanged joints			1	x	2		2.00	Nos
iii	350mm dia near valves			1	x	0		0.00	Nos
iv	150mm dia near valves			1	x	2		2.00	Nos
16	Supplying & fixing of 150mm dia Dia vents with bend at top							8	nos.

## PROPOSED RECYCLE WATER SUPPLY SYSTEM

	At rock portion							276.83	Cum	<b>960.08</b>	1	Cum	265774.15
7	Manufacture, supply, delivery of HDPE pipes including Specials conforming to IS 4984 - 1995 including transportation to any where in TG, Excise duty, sales tax etc., complete ( Supply upto 90mm dia in coil & above 90mm dia strightin length in 6M) (6 Kg/Sq Cm)												
	110 mm dia HDPE 6Kg/Cm2 pipe	1	x	1	2534.00			2534.00	Rmt	<b>404.00</b>	1	Rmt	1023736.00
	125 mm dia HDPE 6Kg/Cm2 pipe	1	x	1	167.00			167.00	Rmt	<b>527.00</b>	1	Rmt	88009.00
	140 mm dia HDPE 6Kg/Cm2 pipe	1	x	1	386.00			386.00	Rmt	<b>661.00</b>	1	Rmt	255146.00
	160 mm dia HDPE 6Kg/Cm2 pipe	1	x	1	109.00			109.00	Rmt	<b>859.00</b>	1	Rmt	93631.00
8	Lowering, laying, jointing & testing of HDPE Pipe line laid to true alignment and gradient to hydraulic field test pressure per IS code including cost of water with minimum water lead of 500m (Labour charges only) Outer dia of pipes in mm.												
	63 mm dia HDPE 6Kg/Cm2 pipe	1	x	1	0.00			0.00	Rmt	<b>89.07</b>	1	Rmt	0.00
	75 mm dia HDPE 6Kg/Cm2 pipe	1	x	1	0.00			0.00	Rmt	<b>89.07</b>	1	Rmt	0.00
	90 mm dia HDPE 6Kg/Cm2 pipe	1	x	1	0.00			0.00	Rmt	<b>89.07</b>	1	Rmt	0.00
	110 mm dia HDPE 6Kg/Cm2 pipe	1	x	1	2534.00			2534.00	Rmt	<b>90.63</b>	1	Rmt	229656.42
	125 mm dia HDPE 6Kg/Cm2 pipe	1	x	1	167.00			167.00	Rmt	<b>106.57</b>	1	Rmt	17797.19
	140 mm dia HDPE 6Kg/Cm2 pipe	1	x	1	386.00			386.00	Rmt	<b>113.68</b>	1	Rmt	43880.48
	160 mm dia HDPE 6Kg/Cm2 pipe	1	x	1	109.00			109.00	Rmt	<b>122.89</b>	1	Rmt	13395.01
	180 mm dia HDPE 6Kg/Cm2 pipe	1	x	1	0.00			0.00	Rmt	<b>133.61</b>	1	Rmt	0.00
	Manufacture, supply, & delivery of HDPE fittings conforming to IS 4984 - 1995 including transportation to any where in TG, Central excise duty, sale tax etc., complete												
	<b>Bends for</b>												
	110 mm dia HDPE 6Kg/Cm2 pipe	1	x	25				25	Nos	<b>440.84</b>	1	Nos	11021.00
	125 mm dia HDPE 6Kg/Cm2 pipe	1	x	2				2	Nos	<b>651.34</b>	1	Nos	1302.68
	140 mm dia HDPE 6Kg/Cm2 pipe	1	x	4				4	Nos	<b>856.33</b>	1	Nos	3425.32
	160 mm dia HDPE 6Kg/Cm2 pipe	1	x	1				1	Nos	<b>1277.33</b>	1	Nos	1277.33
	180 mm dia HDPE 6Kg/Cm2 pipe	1	x	0				0	Nos	<b>1277.33</b>	1	Nos	0.00
	<b>End caps for</b>												
	110 mm dia HDPE 6Kg/Cm2 pipe	1	x	25				25	Nos	<b>128.95</b>	1	Nos	3223.75
	125 mm dia HDPE 6Kg/Cm2 pipe	1	x	2				2	Nos	<b>176.34</b>	1	Nos	352.68
	140 mm dia HDPE 6Kg/Cm2 pipe	1	x	4				4	Nos	<b>206.09</b>	1	Nos	824.36
	160 mm dia HDPE 6Kg/Cm2 pipe	1	x	1				1	Nos	<b>316.30</b>	1	Nos	316.30
	180 mm dia HDPE 6Kg/Cm2 pipe	1	x	0				0	Nos	<b>316.30</b>	1	Nos	0.00
	<b>Long neck pipe ends for</b>												
	110 mm dia HDPE 6Kg/Cm2 pipe	1	x	25				25	Nos	<b>231.44</b>	1	Nos	5786.00
	125 mm dia HDPE 6Kg/Cm2 pipe	1	x	2				2	Nos	<b>415.49</b>	1	Nos	830.98
	140 mm dia HDPE 6Kg/Cm2 pipe	1	x	4				4	Nos	<b>389.04</b>	1	Nos	1556.16
	160 mm dia HDPE 6Kg/Cm2 pipe	1	x	1				1	Nos	<b>543.34</b>	1	Nos	543.34
	180 mm dia HDPE 6Kg/Cm2 pipe	1	x	0				0	Nos	<b>543.34</b>	1	Nos	0.00
	<b>MS flanges to suit HDPE pipes for</b>												
	110 mm dia HDPE 6Kg/Cm2 pipe	1	x	25				25	Nos	<b>213.60</b>	1	Nos	5340.00
	125 mm dia HDPE 6Kg/Cm2 pipe	1	x	2				2	Nos	<b>293.13</b>	1	Nos	586.26
	140 mm dia HDPE 6Kg/Cm2 pipe	1	x	4				4	Nos	<b>318.12</b>	1	Nos	1272.48
	160 mm dia HDPE 6Kg/Cm2 pipe	1	x	1				1	Nos	<b>416.97</b>	1	Nos	416.97
	180 mm dia HDPE 6Kg/Cm2 pipe	1	x	0				0	Nos	<b>416.97</b>	1	Nos	0.00
	<b>Tees for</b>												
	110 mm dia HDPE 6Kg/Cm2 pipe	1	x	25				25	Nos	<b>429.82</b>	1	Nos	10745.50
	125 mm dia HDPE 6Kg/Cm2 pipe	1	x	2				2	Nos	<b>646.93</b>	1	Nos	1293.86
	140 mm dia HDPE 6Kg/Cm2 pipe	1	x	4				4	Nos	<b>891.60</b>	1	Nos	3566.40
	160 mm dia HDPE 6Kg/Cm2 pipe	1	x	1				1	Nos	<b>1536.33</b>	1	Nos	1536.33
	180 mm dia HDPE 6Kg/Cm2 pipe	1	x	0				0	Nos	<b>1536.33</b>	1	Nos	0.00
9	Manufacture, Supply and delivery of DI D/F Gate Valves (Soft Seated) Resilient seated soft sealing gate valves (Sluice valves) with body bonnet of ductile cast iron of grade GGG40/SG- 400/15 or GGG-50/SG-500/7 or equivalent grade as per I.S.3896-part2-1985 and subsequent revisions, wedge fully rubber lined with EPDM food grade quality and seals of NBR and the valves should be of vacuum tight and 100% leak proof with face to face dimensions as per BS5163-89/IS14846-2000/DIN 3202 F 4. All the valves should be with Electrostatic powder coating both inside and outside pocket less body passage. Drilled as per IS:1538.												
	Sluice Valves	1	x	7				7	Nos	35554.85	1	Nos	248883.95
10	<b>PHE-CISV-15</b> : Lowering, keeping in position and fixing D.I. sluice valves (with cap / with hand wheel & reflex valves) including cost of bolts, nuts, rubber insertion, sluice valve and tail pieces												
	Sluice Valves	1	x	7				7	Nos	294.77	1	Nos	2063.39
	PHE-JCIF-5-: Jointing DI pipes, fittings and valves with flanged ends including cost of jointing materials such as bolts, rubber insertion, white lead including filling with water, with lead up to 500 meters and testing to required pressure complete. (Reference to specifications. BIS No.3114/1994.)												
		1	x	7				7	Nos	<b>589.16</b>	1	Nos	4124.12
11	Manufacture, supply and delivery of Single Chamber DI Air Valve with Body and cover in Ductile Iron of grade SG 400/12 or equivalent grade as per I.S.3896-part2-1985 and subsequent revisions. All internal parts such as float, shell etc., all cover bolts, of stainless steel, and Gaskets and seals of EPDM food grade quality.S Epoxy powder coating (EP-P) inside and outside colour blue. Drilled as per IS:1538.												
	50mm dia Air Valve	1	x	5				5	Nos	12786.70	1	Nos	63933.50
12	Labour charges for fixing Kinetic Air Valves Double Air valves/ Air Cushion valve excluding cost of jointing materials such as bolts, nuts and rubber insertions etc., complete.												
	50mm dia Air Valve	1	x	5				5	Nos	339.49	1	Nos	1697.45

13	Supply and delivery of "Resilient Seated Soft Sealing" Gate Valves PN 1.60 (Sluice Valves) with Body and Bonnet of Ductile Iron GGG-40/SG-400/15 or GGG-50/SG-500/7 or Equivalent as per IS1865, IS:3896-2 and Wedge fully Rubber Lined with food grade quality grade W270 grade EPDM, Replaceable Spindle Nut without gland packing with 3-O ring protection system on the Shaft and Seals of NBR. The Valves should be Vacuum tight and 100% leak proof with face to face dimensions as BS:5163 Type A/IS:14846. All the valves should be with fusion bonded Electrostatic Powder coating both inside and outside (Min 250 Microns)-RAL 5005 with Pocket Less Straight through body Passage conforming to Design standards of DIN-3202F4/BS:5163 Type A Flange drilling as per IS - 1538 including all taxes, duties , completed and lowering, laying and fixing the valve in the pipeline including necessary specials such as scour tee, double flanged pipes, duck foot bend, semicircular bend, ec., jointing materials, and Sluice valve with extended stem rod, providing 180 mm dia HDPE 6 Kg / cm2 pipe of 0.50 m length with threaded end cap at top and HDPE pipe ends long neck suitable for 180 mm dia pipe attached at bottom of pipe over sluice valve instead of valve chambers as per the design and drawings, etc.complete, etc.complete for finished item of work as per the standard specifications and as directed by the department Engineers. The rates are inclusive of cost and conveyance of all materials and labour charges and all taxes, levies and duties, etc complete for finished item of work, but excluding GST in the Village Distribution System for Scour arrangements											
	Scour Valves of P.N. 1.6											
	80 mm dia sluice valves on HDPE pipelines of 63 mm to 180 mm dia lines with Scour arrangements	1	x	3				3 Nos	20689.00		1 Nos	62067.00
14	Construction of RCC valve chamber of size 0.90 Mts. X 0.90 Mts. X 1.00 Mts. including earthwork excavation by mechanical means of size 1.60 Mts. X 1.60 Mts. X 1.15 Mts. and laying with CC (1:4:8) proportion 40mm nominal size graded HBG metal of 1.60 Mts. X 1.60 Mts. X 0.15 Mts and laying with VRCC M30 design mix concrete in cost of steel with fabrication, centering, vibration for long sidewalls of 1.25 Mts. X 0.20 Mts. X 1.00 Mts, short sidewalls of 0.90mx 0.20m x 1.00m and slab of valve pit of size 1.25 Mts. X 1.25 Mts. X 0.15 Mts ( duly providing openings) and manhole covers and frames of SFRC of BIS:12592 with ISI make and carting of surplus earth including all cost of materials, transportation, labour charges, centering charges etc., complete for finished item of work. The work shall be executed as per drawings and suitable material as per technical specifications and as directed by the Engineer-in-Charge.											
	For up to 200mm dia Sluice valves and for revamping pipe lines	1	x	5				5 Nos	24537.00		1 Nos	122685.00
15	Carting away the surplus excavated material i.e. <b>Earth and Rubble</b> from the site to a suitable distance of about 10.00 Km including loading, unloading , conveyance charges and dumping the carted material at the contractors cost, labour charges, all leads & lifts and other incidental and operational charges etc., complete.											
a	90% of rock Qty							415.25				
								415.25	Cum	52.50	1 Cum	21800.63
16	Supply, Delivery, Installation & Testing Electro Magnetic Flow (EMF) Meters with all arrangements for Bulk Water Supply Monitoring at Inlet of Each OHSR's	1	x	1				1 Nos	200000.00		1 Nos	200000.00
	<b>Total Rs.</b>											<b>4371704.00</b>
											<b>Say Rs.</b>	<b>43.72 Lakhs</b>

MMLP JOGIGHOPA		
Under Ground Sewerage System with Sewage Treatment Plant		
GENERAL ABSTRACT		
S. No	Description	Amount (Rs.)
<b>A</b>	<b>Cost of Sewerage Network of length as per the design</b>	
1	Sewerage Network Length 3.4 km, including STP to Outfall to disposal location, Manholes, Inspection Chambers, House Service Connections.	53712562.91
	Man holes-136Nos	
	HSCs-63Nos	
	Ics-31.5Nos	
2	Providing 0.5 MLD STP including Operation and Maintenance	14255000.00
	<b>Sub Total A</b>	<b>67967562.91</b>
<b>B</b>	<b>LS Provisions</b>	
3	Provision towards Mechanical sewer cleaning equipments	805688.44
	<b>Sub Total B</b>	<b>805688.44</b>
	<b>Sub Total A + Sub Total B</b>	<b>68773251.35</b>
<b>C</b>	<b>Other LS Provisions</b>	
4	Provision towards U/F items of works etc.,	1470641.10
5	Provision towards GST @ 12%	8156107.55
	<b>Sub Total C</b>	<b>9626748.65</b>
	<b>GRAND TOTAL</b>	<b>78400000.00</b>
	<b>Grand Total in Lakhs</b>	<b>784.00</b>

MMLP Jogighopa												
Providing Under Ground Drainage System												
DETAILED AND ABSTRACT ESTIMATE												
S.N.	Description of Item	No			L	B	D	Quantity		Rate	Per	Amount
	<b>Total pipe length</b>											
	150mm ID SWG Sewer Lines	1	x	1	0.00	0.75						
	200mm ID DWC Sewer Lines	1	x	1	3400.00	0.75						
	from IC to Main Manholes	1	x	32	4	0.45						
					<b>3400</b>							
1	Cutting open water bound macadam road including soiling for pipe line trench work. as directed by the departmental officers.									data- sewer- Sn-3		
	150mm ID SWG Sewer Lines	1	x	1	0.00	0.75	0.150	0.00				
	200mm ID DWC Sewer Lines	1	x	1	136.00	0.75	0.150	15.30				
	from IC to Main Manholes	1	x	31.50	0.16	0.45	0.150	0.34				
								<b>15.64</b>	Cum	<b>717.75</b>	1 Cum	<b>11225.61</b>
*	<b>Earth work Excavation up to 3.00m Depth as per design sheet</b>							<b>53552.51</b>				
2	<b>RBR-FNDN-1- (I-B-i) - In ordinary soils up to 3.00 Mts depth below GL by Mechanical means:</b> Earthwork excavation in all kinds of soil for Pipe line trenches as per drawings and technical specifications including setting out, construction of shoring and bracing, removal of stumps and other deleterious material , dressing of sides and bottom as per Technical Specification 304 MORTH and as directed by the departmental officer including protecting the existing utility services wherever it is possible during the execution and taking all precautionary measures in the restricted areas for laying sewer/water lines including diversion of traffic and backfilling in trenches with excavated suitable material and disposal of remaining earth upto a lead of 50 m, including all incidental and operational charges etc., complete for Pipe Lines <b>by mechanical means.</b>									data- sewer- Sn-5		
	% of the EWE Quantity up to 3.00m depth	1	x	1	53552.51	60%		32131.51	Cum	<b>106.00</b>	1 Cum	<b>3405940.06</b>
3	<b>RBR-FNDN-1- ( I-A-i ) In ordinary soils, up to 3.00 Mts depth below GL by Manual means:</b> Earthwork excavation in all kinds of soil for Pipe line trenches as per drawings and technical specifications including setting out, construction of shoring and bracing, removal of stumps and other deleterious material , dressing of sides and bottom as per Technical Specification 305 MoRD / 304 MoRTH and as directed by the departmental officer including protecting the existing utility services wherever it is possible during the execution and taking all precautionary measures in the restricted areas for laying sewer/water pipe lines including diversion of traffic and backfilling in trenches with excavated suitable material and disposal of remaining earth upto a lead of 50 m, including all incidental and operational charges etc., complete <b>for Pipe Line trenches by manual means.</b>									data- sewer- Sn-4		
	% of the EWE Quantity	1	x	1	53552.51	20%		<b>10710.50</b>	Cum	<b>386.47</b>	1 Cum	<b>4139286.94</b>

4	RBR-FNDN-1- (IV) - Hard rock (blasting prohibited) -up to 3.00Mts. below GL: Excavation in Hard Rock in habitant areas where conventional blasting can not be done for Pipe line trenches as per drawings and technical specifications including setting out, construction of shoring and bracing, removal of stumps and other deleterious material , dressing of sides and bottom as per Technical Specification 305 MoRD / 304 MoRTH and as directed by the departmental officer including protecting the existing utility services wherever it is possible during the execution and taking all precautionary measures in the restricted areas for laying sewer/water pipe lines including diversion of traffic and disposal of rock upto a lead of 50 m, including all incidental and operational charges etc., complete									data- sewer- Sn-13			
	% of the EWE Quantity	1	x	1	53552.51	20%		10710.50	Cum	1945.31	1	Cum	20835242.76
5	PHE-SHST-25: Providing shoring and shrutting for excavation of trenches for laying pipe lines including cost and conveyance of all materials, labour charges and removal of shoring and shuttering at appropriate places as directed by the departmental officers with all incidental and operational charges etc, complete.									data- sewer- Sn-23. a,b & c			
a	Single staging for up to 2.50 Mts.	1	x	2	3400.00		1.500	10200.00	Sqm	40.84	1	Sqm	416568.00
6	PHE-BHLW-26 : Barricading, hoarding, lighting and watching etc., for water supply and sewerage works for trenches of depths upto 6'-0" (2 Meter) below G.L									data- sewer- Sn-24			
	Pipe line trenches and main road junctions	1	x	1	3400.00			3400.00	Rmt	123.75	1	Rmt	420750.00
7	Supply and fiilling with <b>Gravel</b> in trenches, sides of foundations with initial lead in layers above the outer dia of pipe, consolidating each deposited layer by watering and ramming including cost and conveyance of water to work site and all operational, incidental, labour charges, hire charges of T & P etc., complete for finished item of work. (APSS NO. 309 & 310)									data- sewer- Sn-26 & 26.a			
a	<b>Bedding and cradling for DWC pipes</b>												
	150mm ID SWG Sewer Lines	1	x	1	0.00	0.00	0.000	0.00					
	200mm ID DWC Sewer Lines	1	x	1	3400.00	1.50	2.000	10200.00					
	Deduct pipe volume												
	150mm ID SWG Sewer Lines	-1	x	1	0.00		0.000	0.00					
	200mm ID DWC Sewer Lines	-1	x	1	3400.00		1.500	-5100.00					
					<b>Total</b>			<b>5100.00</b>					
	Supply and fiilling with <b>Stone crusher dust in trenches</b> , sides of foundations with initial lead in layers not exceeding 15cm thick, consolidating each deposited layer by watering and ramming including cost and conveyance of water to work site and all operational, incidental, labour charges, hire charges of T & P etc., complete for finished item of work. (APSS NO. 309 & 310)						Bedding Qty with deducted pipe Volume						
	150mm ID SWG Sewer Lines	1	x	1	0.00		0.130	0.00					



	200mm ID DWC Sewer Lines	1	x	1	3400.00		0.290	986.00					
								986.00	Cum	718.25	1	Cum	708194.50
8	Manufacture, supply & delivery of (DWC) structured wall polyethylene / polypropylene piping system class SN-8 with non smooth external annular corrugated and smooth internal surface (Double wall) for non pressure sewage & Drainage application pipes of standard length 6m, grade conforming to IS 16098 (part-II:2013) including rubber gasket, transportation to anywhere in Telangana, loading, unloading charges but excluding all taxes etc complete.												
b	150mm ID SWG Sewer Lines	1	x	1	0			0.00	Rmt	380.61	1	Rmt	0.00
c	200mm ID DWC Sewer Lines	1	x	1	3400.00			3400.00	Rmt	568.08	1	Rmt	1931455.00
9	Lowering, laying of Class SN8 Double wall corrogated (DWC) piping system in into ready made trenches, laying true to line and level and perfect linking at joints, encasing the pipe alround with soft gravel, testing and commissioning, and giving necessary hydraulic test to the required pressure as per ISS etc complete for finished item of work.												
a	150mm ID SWG Sewer Lines	1	x	1	0.00			0.00	Rmt	170.42	1	Rmt	0.00
b	200mm ID DWC Sewer Lines	1	x	1	3400.00			3400.00	Rmt	238.59	1	Rmt	811206.00
10	Supplying, laying, jointing and testing 152mm <b>SWG SP-1 pipes</b> of ISI make conforming to ISI & 4127 with airtight cement joints in CM1.5:1 prop. Upto 1.5m depth. 10% of 150mm dia	1	x	1	0.00			0.00	Rmt	416.95	1	Rmt	0.00
11	RCC Manholes Construction of sewer conical manholes M- 20 Nominal mix (Cement:fine aggregate: coarse aggregate) corresponding to Table 9 of IS 456 using 20mm size graded machine crushed hard granite metal (coarse aggregate) from approved quarry including cost and conveyance of all materials like cement, fine aggregate (sand) coarse aggregate, water etc., inside plastering 12mm thick in single coat of Portland slag CM (1:3) prop; and outside plastering 12mm thick in single coat of portland slag CM (1:3) prop; 12mm thick, the foundation concrete in CC (1:4:8) prop; using 40mm nominal size hard broken granite stone and supporting incoming pipes with concrete block / masonry wherever necessary including finishing the gap with CM (1:3) prop; on both the sides including supply and fixing of manhole frame and cover (HD-20) and Plastic steps including cost and conveyance of all other incidental and operational charges etc., complete.												
d	<b>Man holes of 1.50m dia and 3.00m depth (3.00 to m to 5.0m)</b>												
	1.50m dia manhole 5.0m depth	1	x	136				136	Nos	80025.84	1	Nos	10883514.24
	1.50m dia manhole extra lift of 0.1m depth up to 3.00m	1	x	136				136	Nos	3057.01	1	Nos	415753.36

12	RCC Precast Manholes Construction of sewer conical manholes M- 20 Nominal mix (Cement:fine aggregate: coarse aggregate) corresponding to Table 9 of IS 456 using 20mm size graded machine crushed hard granite metal (coarse aggregate) from approved quarry including cost and conveyance of all materials like cement, fine aggregate (sand) coarse aggregate, water etc., inside plastering 12mm thick in single coat of Portland slag CM (1:3) prop; and outside plastering 12mm thick in single coat of portland slag CM (1:3) prop; 12mm thick, the foundation concrete in CC (1:4:8) prop; using 40mm nominal size hard broken granite stone and supporting incoming pipes with concrete block / masonry wherever necessary including finishing the gap with CM (1:3) prop; on both the sides including supply and fixing of manhole frame and cover (HD-20) and Plastic steps including cost and conveyance of all other incidental and operational charges etc., complete.												
a	1.50m dia manhole above 3m depth	1	x	136				136	Nos	53546.44	1	Nos	7282316.15
13	Construction of 0.6mts inner dia Inspection chambers ( IC) using M15 grade of concrete (Nominal Mix) using 20mm graded metal including cost and conveyance of all materials like cement, sand, coarse aggregate ,water , 100mm thick side wall and base slab in M15 grade, 100mm thick PCC(1:4:8)prop using 20mm HBG metal , including earth work excavation, supply and fixing of FRC frame and cover HD 20 560mm clear opening , including cost of steel and its fabrication charges ,backfilling in trenches with excavated material ,carting of excess excavated materials upto a lead of 5kms etc complete as per approved drawings and as directed by Engineer-in-Charge complete for finished item of work.			32						data-I.C			
a	.6mts dia and 0.6mts depth	1	x	13				13.00	Nos	5501.44	1	Nos	71518.72
b	.6mts dia and 0.7mts depth	1	x	9				9.00	Nos	5761.81	1	Nos	51856.29
c	.6mts dia and 0.8mts depth	1	x	6				6.00	Nos	6027.00	1	Nos	36162.00
d	.6mts dia and 0.9mts depth	1	x	3				3.00	Nos	6395.82	1	Nos	19187.46
										Amt in lakhs			
	Manufacture, supply, & delivery of Unplasticized Non-Pressure Polyvinyl Chloride(PVC-U) pipes of 110mm OD and 160mm OD of pipe series(S16.5) dark (any shade of Brown) for use in underground drainage & sewerage systemr conforming to IS 15328/2003) with solvent cement jointing as per specification inclusive of transportation to the Sub- Divisional stores any where in A.P, including Central Excise duty, Cess, & VAT etc.,												
a	From IC to man holes (1/3rd 3053 of nos- 110mm OD)	1	x	11	4			42	Rmt	194	1	Rmt	8148.00
b	From IC to man holes (2/3rd of 3053 nos- 160mm OD)	1	x	21	4			84	Rmt	409	1	Rmt	34356.00
c	Direct connections from house property to IC(1/3rd of 6105 nos- 110mm OD)	1	x	21	4			84	Rmt	194	1	Rmt	16296.00
d	Direct connections from house property to IC (2/3rd of 6105 nos- 160mm OD)	1	x	42	4			168	Rmt	409	1	Rmt	68712.00
14	Carting of surplus excavated rock/Soil within a lead of 5Km from the site to a distance suitable including loading charges by manual means ,cost & conveyance, dumping, labour charges,vehicle idle charges and other incidental and operational charges etc., complete.									data-Sewer-Sn-29			
	WBM cutting Qty							15.64					
	Rock cutting Qty							10710.50					

	Pipe volume Qty												
	150mm ID SWG Sewer Lines	1	x	1	0.00	3.14	0.180	0.00					
	200mm ID DWC Sewer Lines	1	x	1	3400.00	3.14	0.239	152.46					
								10878.60	Cum	183.70	1	Cum	1998398.82
													53566087.91
	House Service Connections 63 no.s												1.46
										Amount in lakhs			537.13

SBT SEWAGE											
S.No.	Capacity		Total O&M Cost per anum excluding power costs 1st year (lakhs)	Total O&M Cost per anum from 2nd year (lakhs) excluding power costs	Total O&M Cost per anum excluding the power costs in 3rd year (lakhs)	Total O&M Cost per anum excluding the power costs in 4th year (lakhs)	Total O&M Cost per anum excluding the power costs in 5th year (lakhs)	Tota cost (Installation and O&M for 5 years) excluding power costs (Lakhs)	Tota cost (Installation, power costs and O&M for 5 years) (Lakhs)	Tota cost (Installation, power costs Excl. O&M for 5 years) (Lakhs)	Cost for 5 years O&M (Lakhs)
		Area									
1	0.50 MLD	474	3.6	3.96	4.356	4.7916	5.27076	147	165	142.55	21.98
2	0.60 MLD	568	6	6.6	7.26	7.986	8.7846	181	202	165.24	36.64
3	0.75 MLD	711	6	6.6	7.26	7.986	8.7846	209	235	197.90	36.64
4	0.80 MLD	758	6	6.6	7.26	7.986	8.7846	219	247	210.13	36.64
5	0.90 MLD	853	6	6.6	7.26	7.986	8.7846	236	267	230.42	36.64
6	1.00 MLD	900	6	6.6	7.26	7.986	8.7846	253	280	243.56	36.64
7	1.25 MLD	1071	6	6.6	7.26	7.986	8.7846	295	322	285.84	36.64
8	1.50 MLD	1286	9.72	10.692	11.7612	12.93732	14.231052	359	386	327.04	59.35
9	1.75 MLD	1500	9.72	10.692	11.7612	12.93732	14.231052	399	426	366.99	59.35
10	2.00 MLD	1714	9.72	10.692	11.7612	12.93732	14.231052	438	466	406.49	59.35
11	2.25 MLD	1929	9.72	10.692	11.7612	12.93732	14.231052	477	505	445.22	59.35
12	2.50 MLD	2143	9.72	10.692	11.7612	12.93732	14.231052	515	543	483.40	59.35
13	3.00 MLD	2571	9.72	10.692	11.7612	12.93732	14.231052	591	618	558.77	59.35
14	3.25 MLD	2786	9.72	10.692	11.7612	12.93732	14.231052	628	655	595.59	59.35
15	3.50 MLD	3000	9.72	10.692	11.7612	12.93732	14.231052	664	692	632.25	59.35
16	3.75 MLD	3214	9.72	10.692	11.7612	12.93732	14.231052	701	728	668.77	59.35
17	4.00 MLD	3429	9.72	10.692	11.7612	12.93732	14.231052	737	764	705.03	59.35

MMLP JOGIGHOPA		
CONSTRUCTION OF STORM WATER DRAINS		
GENERAL ABSTRACT		
S.No	Components	Amount (Rs.)
<b>A</b>	<b>Storm Water Draianage</b>	
1	Construction of Storm water drains for MMLP	63484427.00
	<b>Sub Total - A</b>	<b>63484427.00</b>
<b>B</b>	<b>GST &amp; Other L.S Provisions</b>	
2	Provision towards Works Contract GST @ 12 %	7618131.00
3	Unforeseen items	2897442.00
	<b>Sub Total - B</b>	<b>10515573.00</b>
	<b>Grand Total (A+B)</b>	<b>74000000.00</b>
	<b>Grand Total in Lakhs</b>	<b>740.00</b>

MMLP JOGIGHOPA													
CONSTRUCTION OF STORM WATER DRAINS													
PRIMARY DRAIN													
c	New Drains Sizes												
i)	0-3 m depth												
	for new Drains												
1	Drain : 0.45 x 0.45 m	1	x	1	1776.92	1.25	0.85	1887.98					
2	Drain : 0.60 x 0.60 m	1	x	1	2163.19	1.40	1.00	3028.47					
3	Drain : 0.75 x 0.75 m	1	x	1	326.09	1.55	1.15	581.26					
4	Drain : 0.90 x 0.90 m	1	x	1	1843.80	1.70	1.30	4074.80					
5	Drain : 0.90 x 1.05 m	1	x	1	422.85	1.70	1.45	1042.33					
6	Drain : 1.05 x 1.05 m	1	x	1	297.88	1.85	1.45	799.06					
7	Drain : 1.05 x 1.20 m	1	x	1	398.19	1.85	1.60	1178.64					
8	Drain : 1.20 x 1.20 m	1	x	1	103.64	2.00	1.60	331.65					
9	Drain : 1.20 x 1.35 m	1	x	1	0.00	2.10	0.45	0.00					
10	Drain : 1.35 x 1.35 m	1	x	1	0.00	2.25	0.45	0.00					
11	Drain : 1.50 x 1.35 m	1	x	1	0.00	2.40	0.45	0.00					
12	Drain : 1.50 x 1.50 m	1	x	1	0.00	2.40	0.45	0.00					
13	Drain : 1.65 x 1.50 m	1	x	1	901.92	2.55	1.95	4484.80					
14	Drain : 1.65 x 1.65 m	1	x	1	0.00	2.55	0.45	0.00					
					8234.48			17408.99	Cum				
	Earthwork Excavation Quantity for 0 to 3 m depth												
1	Earth Work Calculation:									Data-SW Drains			
	For New Covered Drains												
1	Drain : 0.45 x 0.45 m	1	x	1	1776.92	1.25	0.85	1887.98					
2	Drain : 0.60 x 0.60 m	1	x	1	2163.19	1.40	1.00	3028.47					
3	Drain : 0.75 x 0.75 m	1	x	1	326.09	1.55	1.15	581.26					
4	Drain : 0.90 x 0.90 m	1	x	1	1843.80	1.70	1.30	4074.80					
5	Drain : 0.90 x 1.05 m	1	x	1	422.85	1.70	1.45	1042.33					
6	Drain : 1.05 x 1.05 m	1	x	1	297.88	1.85	1.45	799.06					
7	Drain : 1.05 x 1.20 m	1	x	1	398.19	1.85	1.60	1178.64					
8	Drain : 1.20 x 1.20 m	1	x	1	103.64	2.00	1.60	331.65					
9	Drain : 1.20 x 1.35 m	1	x	1	0.00	2.10	0.45	0.00					
10	Drain : 1.35 x 1.35 m	1	x	1	0.00	2.25	0.45	0.00					
11	Drain : 1.50 x 1.35 m	1	x	1	0.00	2.40	0.45	0.00					
12	Drain : 1.50 x 1.50 m	1	x	1	0.00	2.40	0.45	0.00					
13	Drain : 1.65 x 1.50 m	1	x	1	901.92	2.55	1.95	4484.80					
14	Drain : 1.65 x 1.65 m	1	x	1	0.00	2.55	0.45	0.00					
					8234.48			17408.99	Cum				
						Net Quantity		17408.99	Cum Cum				

2	RBR-FNDN-1- (I-B-i) - In ordinary soils up to 3.00 Mts depth below GL by Mechanical means: Earthwork excavation in all kinds of soil for foundation as per drawings and technical specifications clause 305.1 including setting out, construction of shoring and bracing, removal of stumps and other deleterious material , dressing of sides and bottom as per Technical Specification 304 MORTH and as directed by the departmental officer including protecting the existing utility services wherever it is possible during the execution and taking all precautionary measures in the restricted areas including diversion of traffic and backfilling in trenches with excavated suitable material and disposal of remaining earth upto a lead of 50 m, including all incidental and operational charges etc., complete by mechanical means.								Data-SW Drains				
	% of the above Quantity.	1	x	70%	17408.99	Cum		12186.00	Cum	107.49	1	Cum	13,09,873.00
3	RBR-FNDN-1- ( I-A-i ) In ordinary soils up to 3.00 Mts depth below GL by Manual means: Earthwork excavation in all kinds of soil for foundation as per drawings and technical specifications clause 305.1 including setting out, construction of shoring and bracing, removal of stumps and other deleterious material , dressing of sides and bottom as per Technical Specification 304 MORTH and as directed by the departmental officer including protecting the existing utility services wherever it is possible during the execution and taking all precautionary measures in the restricted areas including diversion of traffic and backfilling in trenches with excavated suitable material and disposal of remaining earth upto a lead of 50 m, including all incidental and operational charges etc., complete by manual means.								Data-Drains				
	% of the above Quantity.			20%	17408.99	Cum		3482.00	Cum	220.84	1	Cum	7,68,965.00
4	RBR-FNDN-1- (IV) - Hard rock (blasting prohibited) -up to 3.00Mts. below GL: Excavation in Hard Rock in habitant areas where conventional blasting can not be done for Pipe line trenches as per drawings and technical specifications clause 305.1 including setting out, construction of shoring and bracing, removal of stumps and other deleterious material , dressing of sides and bottom as per Technical Specification 305 MoRD / 304 MoRTH and as directed by the departmental officer including protecting the existing utility services wherever it is possible during the execution and taking all precautionary measures in the restricted areas disposal of rock upto a lead of 50 m, including all incidental and operational charges etc., complete								Data-SW Drains				
	% of the above Quantity.			10%	17408.99	Cum		1741.00	Cum	1945.31	1	Cum	33,86,785.00
5	Dewatering pipe line trenches etc, duly bailing out water from the pipe line trenches with oil engine driven pumpsets, including hire charges, fuel charges and wages for Driver and Helper and all other incidental and operational charges including suction and delivery hose, lead of drain in to natural drain etc, complete.	nos		day	hr	Hp							
		35	x	10	8.00	5		14000.00	Hphr	64.76		Hphr	9,06,640.00
6	Carting away the surplus excavated rock from the work site with a lead of 5.0 km beyond initial lead including loading, unloading and conveyance but excluding stacking charges etc., complete for roads/drains- 1 cum								Data-Drains				
	50% of excavated earth							4352.25	Cum	183.70	1	Cum	7,99,508.00

7	BLD-CSTN-2-8 (16): Collection ,Supply and filling of with HBG stone chips 2.36 mm & below from approved quarry to work site and stacking at work site to Dept. gauge for premeasurements including cost and conveyance of all material and all labour charges etc. complete as per standard specifications. Clause 305.3.9 MORD & 304 MORTH									Data-SW Drains			
	Drain : 0.45 x 0.45 m	1	x	1	1776.92	1.25	0.15	333.17					
	Drain : 0.60 x 0.60 m	1	x	1	2163.19	1.40	0.15	454.27					
	Drain : 0.75 x 0.75 m	1	x	1	326.09	1.55	0.15	75.82					
	Drain : 0.90 x 0.90 m	1	x	1	1843.80	1.70	0.15	470.17					
	Drain : 0.90 x 1.05 m	1	x	1	422.85	1.70	0.15	107.83					
	Drain : 1.05 x 1.05 m	1	x	1	297.88	1.85	0.15	82.66					
	Drain : 1.05 x 1.20 m	1	x	1	398.19	1.85	0.15	110.50					
	Drain : 1.20 x 1.20 m	1	x	1	103.64	2.00	0.15	31.09					
	Drain : 1.20 x 1.35 m	1	x	1	0.00	2.10	0.15	0.00					
	Drain : 1.35 x 1.35 m	1	x	1	0.00	2.25	0.15	0.00					
	Drain : 1.50 x 1.35 m	1	x	1	0.00	2.40	0.15	0.00					
	Drain : 1.50 x 1.50 m	1	x	1	0.00	2.40	0.15	0.00					
	Drain : 1.65 x 1.50 m	1	x	1	901.92	2.55	0.15	344.98					
	Drain : 1.65 x 1.65 m	1	x	1	0.00	2.55	0.15	0.00					
					<b>8234.48</b>			<b>2010.49</b>	<b>Cum</b>	<b>704.36</b>	<b>1</b>	<b>Cum</b>	<b>14,16,109.00</b>
8	RBR-FNDN-4-i : Providing concrete for plain cement concrete of M10 grade using 40 mm nominal size Graded hard stone aggregate, mechanically mixed, placed in foundation and compacted by vibration including curing for 14 days complete as per drawings and technical specifications Clause 802, 803, 1202 & 1203 MORD and 1500, 1700 & 2100 MORTH.									Data-SW Drains			
	Drain : 0.45 x 0.45 m	1	x	1	1776.92	1.25	0.15	333.17					
	Drain : 0.60 x 0.60 m	1	x	1	2163.19	1.40	0.15	454.27					
	Drain : 0.75 x 0.75 m	1	x	1	326.09	1.55	0.15	75.82					
	Drain : 0.90 x 0.90 m	1	x	1	1843.80	1.70	0.15	470.17					
	Drain : 0.90 x 1.05 m	1	x	1	422.85	1.70	0.15	107.83					
	Drain : 1.05 x 1.05 m	1	x	1	297.88	1.85	0.15	82.66					
	Drain : 1.05 x 1.20 m	1	x	1	398.19	1.85	0.15	110.50					
	Drain : 1.20 x 1.20 m	1	x	1	103.64	2.00	0.15	31.09					
	Drain : 1.20 x 1.35 m	1	x	1	0.00	2.10	0.15	0.00					
	Drain : 1.35 x 1.35 m	1	x	1	0.00	2.25	0.15	0.00					
	Drain : 1.50 x 1.35 m	1	x	1	0.00	2.40	0.15	0.00					
	Drain : 1.50 x 1.50 m	1	x	1	0.00	2.40	0.15	0.00					
	Drain : 1.65 x 1.50 m	1	x	1	901.92	2.55	0.15	344.98					
	Drain : 1.65 x 1.65 m	1	x	1	0.00	2.55	0.15	0.00					
					<b>8234.48</b>			<b>2010.49</b>	<b>Cum</b>	<b>5314.88</b>	<b>1</b>	<b>Cum</b>	<b>1,06,85,513.00</b>



9	RBR-FNDN-4 Plain/reinforced M 15 Nominal mix cement concrete Plain Cement Concrete (1:2.5:5) (cement: fine aggregate: Coarse aggregate) using coarse aggregate 20mm graded hard , machine crushed granite from approved quarry including cost and conveyance of all materials like cement, sand, coarse aggregate, water etc. to site, sales on all materials and including all charges for machine mixing, laying concrete in foundations and under flooring bed, ramming in 15 cm layers finishing top surface to the required level curing etc.,and overheads & contractors profit complete for finished item of work. (APSS No. 402)								Data-SW Drains				
	Drain : 0.45 x 0.45 m	1	x	1	1776.92	0.45	0.05	39.98					
	Drain : 0.60 x 0.60 m	1	x	1	2163.19	0.60	0.05	64.90					
	Drain : 0.75 x 0.75 m	1	x	1	326.09	0.75	0.05	12.23					
	Drain : 0.90 x 0.90 m	1	x	1	1843.80	0.90	0.05	82.97					
	Drain : 0.90 x 1.05 m	1	x	1	422.85	0.90	0.05	19.03					
	Drain : 1.05 x 1.05 m	1	x	1	297.88	1.05	0.05	15.64					
	Drain : 1.05 x 1.20 m	1	x	1	398.19	1.05	0.05	20.90					
	Drain : 1.20 x 1.20 m	1	x	1	103.64	1.20	0.05	6.22					
	Drain : 1.20 x 1.35 m	1	x	1	0.00	1.20	0.05	0.00					
	Drain : 1.35 x 1.35 m	1	x	1	0.00	1.35	0.05	0.00					
	Drain : 1.50 x 1.35 m	1	x	1	0.00	1.50	0.05	0.00					
	Drain : 1.50 x 1.50 m	1	x	1	0.00	1.50	0.05	0.00					
	Drain : 1.65 x 1.50 m	1	x	1	901.92	1.65	0.05	74.41					
	Drain : 1.65 x 1.65 m	1	x	1	0.00	1.65	0.05	0.00					
								336.28	Cum	6155.04	1	Cum	20,69,817.00
10	Supply and placing of the Design Mix Concrete M 20 grade corresponding to IS 456 with minimum cement content of 350 kgs per 1 cum of concrete using WEIGH BATCHER / MIXER with 20mm size graded machine crushed hard granite metal (coarse aggregate - as per IS 383 - 1970 and IS 2386 Part 1 to Part 8) from approved quarry including cost and conveyance of all materials like cement, fine aggregate (sand) coarse aggregate, water etc., to site and sales on all materials , centering using Steel scaffolding pipes , jack props , wallers , Foot plates , brackets , steel centering plates etc., including all operational, incidental and labour charges such as weigh batching, machine mixing, laying concrete, curing etc.,complete but excluding cost of steel and its fabrication charges for finished item of work (APSS No. 402)								Data-SW Drains				
	Side Walls												
	Drain : 0.45 x 0.45 m	1	x	2	1776.92	0.10	0.55	195.46					
	Drain : 0.60 x 0.60 m	1	x	2	2163.19	0.10	0.70	302.85					
	Drain : 0.75 x 0.75 m	1	x	2	326.09	0.10	0.85	55.44					
	Drain : 0.90 x 0.90 m	1	x	2	1843.80	0.10	1.00	368.76					
	Drain : 0.90 x 1.05 m	1	x	2	422.85	0.10	1.15	97.26					
								1019.77	Cum	7944.42	1.00	Cum	81,01,481.00
	Drain : 1.05 x 1.05 m	1	x	2	297.88	0.10	1.15	68.51					
	Drain : 1.05 x 1.20 m	1	x	2	398.19	0.10	1.30	103.53					
	Drain : 1.20 x 1.20 m	1	x	2	103.64	0.10	1.30	26.95					
	Drain : 1.20 x 1.35 m	1	x	2	0.00	0.15	0.10	0.00					
	Drain : 1.35 x 1.35 m	1	x	2	0.00	0.15	0.10	0.00					
	Drain : 1.50 x 1.35 m	1	x	2	0.00	0.15	0.10	0.00					

	Drain : 1.50 x 1.50 m	1	x	2	0.00	0.15	0.10	0.00					
	Drain : 1.65 x 1.50 m	1	x	2	901.92	0.15	1.60	432.92					
	Drain : 1.65 x 1.65 m	1	x	2	0.00	0.15	0.10	0.00					
					1701.63			631.91	Cum	7944.42	1	Cum	50,20,158.00
	Base Slab												
	Drain : 0.45 x 0.45 m	1	x	1	1776.92	0.65	0.100	115.50					
	Drain : 0.60 x 0.60 m	1	x	1	2163.19	0.80	0.100	173.06					
	Drain : 0.75 x 0.75 m	1	x	1	326.09	0.95	0.100	30.98					
	Drain : 0.90 x 0.90 m	1	x	1	1843.80	1.10	0.100	202.82					
	Drain : 0.90 x 1.05 m	1	x	1	422.85	1.10	0.100	46.51					
					6532.85			568.87		11032.47	1.00	Cum	62,75,987.00
	Drain : 1.05 x 1.05 m	1	x	1	297.88	1.25	0.100	37.24					
	Drain : 1.05 x 1.20 m	1	x	1	398.19	1.25	0.100	49.77					
	Drain : 1.20 x 1.20 m	1	x	1	103.64	1.40	0.100	14.51					
	Drain : 1.20 x 1.35 m	1	x	1	0.00	1.50	0.150	0.00					
	Drain : 1.35 x 1.35 m	1	x	1	0.00	1.65	0.150	0.00					
	Drain : 1.50 x 1.35 m	1	x	1	0.00	1.80	0.150	0.00					
	Drain : 1.50 x 1.50 m	1	x	1	0.00	1.80	0.150	0.00					
	Drain : 1.65 x 1.50 m	1	x	1	901.92	1.95	0.150	263.81					
	Drain : 1.65 x 1.65 m	1	x	1	0.00	1.95	0.150	0.00					
								365.33	Cum	11032.47	1	Cum	40,30,492.00
	Top slab												
	Drain : 0.45 x 0.45 m	1	x	1	1776.92	0.65	0.000	0.00					
	Drain : 0.60 x 0.60 m	1	x	1	2163.19	0.80	0.100	173.06					
	Drain : 0.75 x 0.75 m	1	x	1	326.09	0.95	0.100	30.98					
	Drain : 0.90 x 0.90 m	1	x	1	1843.80	1.10	0.100	202.82					
	Drain : 0.90 x 1.05 m	1	x	1	422.85	1.10	0.100	46.51					
	Drain : 1.05 x 1.05 m	1	x	1	297.88	1.25	0.100	37.24					
	Drain : 1.20 x 1.20 m	1	x	1	398.19	1.40	0.100	55.75					
	Drain : 1.20 x 1.35 m	1	x	1	103.64	1.50	0.150	23.32					
	Drain : 1.35 x 1.35 m	1	x	1	0.00	1.65	0.150	0.00					
	Drain : 1.50 x 1.35 m	1	x	1	0.00	1.80	0.150	0.00					
	Drain : 1.50 x 1.50 m	1	x	1	0.00	1.80	0.150	0.00					
	Drain : 1.65 x 1.50 m	1	x	1	0.00	1.95	0.150	0.00					
	Drain : 1.65 x 1.65 m	1	x	1	901.92	1.95	0.150	263.81					
	Drain : 1.80 x 1.50 m	1	x	1	0.00	2.20	0.200	0.00					
	Drain : 1.80 x 1.65 m	1	x	1	0.00	2.20	0.200	0.00					
	Drain : 1.80 x 1.80 m	1	x	1	0.00	2.20	0.200	0.00					
	Drain : 1.95 x 1.80 m	1	x	1	0.00	2.35	0.200	0.00					
	Drain : 1.95 x 1.95 m	1	x	1	0.00	2.35	0.200	0.00					
	Drain : 2.10 x 1.95 m	1	x	1	0.00	2.50	0.200	0.00					
	Drain : 2.10 x 2.0 m	1	x	1	0.00	2.50	0.200	0.00					
	Drain : 2.25 x 2.0 m	1	x	1	0.00	2.65	0.200	0.00					
	Drain : 2.4 x 2.0 m	1	x	1	0.00	2.80	0.200	0.00					
					8234.48			833.48	Cum				
	Deductions :												
	Fiber Reinforced concrete covers	1	x	244	0.28		0.100	-6.90					
		1	x	30	0.28		0.150	-1.27					

								-8.17					
								825.31	Cum	11032.47	1	Cum	91,05,166.00
11	BLD-CSTN-4-1-(34) : Providing High Yield Strength Deformed (HYSD)/ Thermo Mechanically Treated (TMT) / Mild steel (MS) steel bars ( Fe 500 grade as per IS 1786-1979) of different diameters for RCC works , including labour charges for straightening, cutting, bending to required sizes and shapes, placing in position with cover blocks of approved materials and size and tying and lap-splicing with binding wire of 18 SWG, forming grills for reinforcement work as per approved designs and drawings, including cost and conveyance of steel bars, including all wastages such as overlaps, couplings, chairs, spacer bars including cost and conveyance of binding wire, cover blocks and all incidental, operational, labour charges such as cutting, bending, placing in position, tying including sales and other taxes on all materials etc., complete for finished item of work in all floors.( APSS No.126								Data-Drains				
	PCC drain 4kg/m <sup>3</sup> as skin reinforcement upto 0.9m x 0.9m drains				2042.0003	4.00	Kg/Cum	8168.00					
	RCC drain 50kg/m <sup>3</sup> from 1.2 x 1.2m to 1.5m x 1.5m drains				1045.0306	50.00	Kg/Cum	52252.00					
	RCC drain 85kg/m <sup>3</sup> from 1.8m x 1.8m and above drains				0.0000	85.00	Kg/Cum	0.00					
								60420.00	Kg	68.17	1	Kg	41,18,831.00
12	Barricading, hoarding, lighting and watching etc., for storm water drains trenches of depths upto 3'-0"(2Meter) by using Bamboos of 1 ½ "dia												
		1	x	1	1647.00			1647.00	Rmt	123.67	1	Rmt	2,03,684.00
13	Supplying and fixing of 100mm dia PVC pipes for weep holes including material, labour charges like cutting size, fixing in side wall etc as directed by Engineer- in- charge												
		1	x	1	3294.00			3294.00	mts	181.78	1	mts	5,98,783.00
14	Construction of Silt Catch Pit of required inner size and depth having required wall thickness including necessary earth work excavation, providing and laying of PCC 1:4:8 of 100 mm thick and providing and laying and placing of Design Mix M25 Graded of Concrete confirming to IS 456/2000 for Reinforcement Cement Concrete Structural elements under controlled water cement ratio using 20mm and down graded machine broken granite stone jelly with required reinforcement as per the approved drawing including transportation, pumping and Vibration charges, cost of centering and shuttering and reinforcement, curing, finishing etc complete as per standard specification and as directed by departmental Engineer in Charge.												
	Inner wide	1	x	1	274.00			274	Nos	9846.00	1	No.	26,97,804.00

15	Construction of cast-in-situ Silt Catch Pit with Rain Water Harvesting Structure of inner size 600x600x600mm including necessary earth work excavation including providing foundation in PCC 1:4:8 under walls 150mm thick and cutting the exisitng storm water drain of size 300x150mm for fixing 2 nos of 160mm dia PVC pipe on the storm water drain mouth, with RCC cast in situ wall of size 120mm in RCC1:1.5:3 with steel of 10.60 kg including fixing FRP Grating Cover with frame of size 700x700mm (clear opening 600x600mm)-10MT - completing the finishing work etc., cost per each number. Using hand bore set drilling of bore hole of 300mm dia upto 4.35m depth including shifting of the hand bore from one place to another place within 5 km and filing in with 20mm HBG metal in 200mm dia PVC pipe 4kg/cm2 (Every 30m)												
	Inner wide	1	x	1	8			8	No.	25859.00	1	No.	2,06,872.00
16	Manufacture as per BIS:12592 (Part 1&2) Supply & Delivery of manhole covers and frames anywhere in T.G., F.O.R. destination including, loading, un-loading & stacking at site ,central excise duty but excluding VAT and other taxes as applicable.												
	H.D.-20 with 560mm dia clear opening	1	x	274				274	Nos	2799.50	1	Each	7,67,063.00
17	Fixing charges of Manhole Frame (as per SSR.No.663 @Page -92)	1	x	274				274	Nos	104.00	1	Each	28,496.00
18	Supplying and fixing of composite Fibreglass reinforced polymer Grating of size 550mm (Length) x 550mm (Height) x 40mm thick for vertical application. The grating should have zero filter content and should be non-painted, but self pigmented. The filter content tested as per ISO 3451, the slot opening should be 30mmx30mm with an average wall thickness of 8mm as directed by departmental officers	1	x	1	274.00			274	Nos	3600.00	1	Each	9,86,400.00
	15m Interval												
	Total Estimate cost									Total Estimated cost in Rs			6,34,84,427
										Total Estimated cost in Lakhs			634.84

MMLP JOGIGHOPA													
Sl. No	Size	Length	Width	Depth	Avg. Depth	EW					0 to 3m depth	3 to 6m depth	Side Wall
						Road	Stone Dust	PCC	Wall/Raft	T. Depth			
1	0.45 x 0.45 m	1776.92	0.45	0.45	0.45	0.10	0.15	0.15	0.10	0.85	0.85	0.00	0.55
2	0.60 x 0.60 m	2163.19	0.60	0.60	0.60	0.10	0.15	0.15	0.10	1.00	1.00	0.00	0.70
3	0.75 x 0.75 m	326.09	0.75	0.75	0.75	0.10	0.15	0.15	0.10	1.15	1.15	0.00	0.85
4	0.90 x 0.90 m	1843.80	0.90	0.90	0.90	0.10	0.15	0.15	0.10	1.30	1.30	0.00	1.00
5	0.90 x 1.05 m	422.85	0.90	1.05	1.05	0.10	0.15	0.15	0.10	1.45	1.45	0.00	1.15
6	1.05 x 1.05 m	297.88	1.05	1.05	1.05	0.10	0.15	0.15	0.10	1.45	1.45	0.00	1.15
7	1.05 x 1.20 m	398.19	1.05	1.20	1.20	0.10	0.15	0.15	0.10	1.60	1.60	0.00	1.30
8	1.20 x 1.20 m	103.64	1.20	1.20	1.20	0.10	0.15	0.15	0.10	1.60	1.60	0.00	1.30
9	1.20 x 1.35 m	0.00	1.20	1.35	0.00	0.10	0.15	0.15	0.15	0.45	0.45	0.00	0.10
10	1.35 x 1.35 m	0.00	1.35	1.35	0.00	0.10	0.15	0.15	0.15	0.45	0.45	0.00	0.10
11	1.50 x 1.35 m	0.00	1.50	1.35	0.00	0.10	0.15	0.15	0.15	0.45	0.45	0.00	0.10
12	1.50 x 1.50 m	0.00	1.50	1.50	0.00	0.10	0.15	0.15	0.15	0.45	0.45	0.00	0.10
13	1.65 x 1.50 m	901.92	1.65	1.50	1.50	0.10	0.15	0.15	0.15	1.95	1.95	0.00	1.60
14	1.65 x 1.65 m	0.00	1.65	1.65	0.00	0.10	0.15	0.15	0.15	0.45	0.45	0.00	0.10
15	1.80 x 1.50 m	0.00	1.80	1.50	0.00	0.10	0.15	0.15	0.20	0.50	0.50	0.00	0.10
16	1.80 x 1.65 m	0.00	1.80	1.65	0.00	0.10	0.15	0.15	0.20	0.50	0.50	0.00	0.10

MULTI MODAL LOGISTIC PARK, JOGIGHOPA		
PROPOSED FIRE FIGHTING WATER SYSTEM		
ABSTRACT ESTIMATE		
S.No	Components	Amount (Rs.)
<b>A</b>	<b>Fire Fighting Water System :-</b>	
1	Supplying, installation, testing and commissioning of Electric & Diesel driven main fire pump suitable for automatic operation and consisting of following complete in all respect as required	2135962.00
2	Providing, laying, testing & Commissioning of Firefighting network System including External Hydrant	11011527.00
	<b>Sub Total - A</b>	<b>13147489.00</b>
<b>B</b>	<b>GST &amp; Other L.S provisions</b>	
3	Provision towards Works Contract GST @ 12%	1577699.00
4	Unforeseen items	274812.00
	<b>Sub Total - B</b>	<b>1852511.00</b>
	<b>Grand Total (A+B)</b>	<b>15000000.00</b>
	<b>Grand Total in Lakhs</b>	<b>150.00</b>

**MULTI MODAL LOGISTIC PARK, JOGIGHOPA**

**FIRE FIGHTING WATER SYSTEM**

**Fire Fighting Pump Sets**

Sl No	Description	Nos			Quantity		Rate	Amount
	<b>FIRE HYDRANT SYSTEM</b>							
1	Supplying, installation, testing and commissioning of <b>Electric driven main</b> fire pump suitable for automatic operation and consisting of following complete in all respect as required							
	a) Horizontal type, multistage, centrifugal, split casing pump of cast iron body & bronze impeller with stainless steel shaft, mechanical seal to ensure a minimum pressure of 3.5 Kg / sq.cm. at highest and farthest outlet at specified flow of 2280 lpm at 70 Mtr. head conforming to IS 1520							
	b) Suitable HP SQ cage induction motor, TEFC, synchronous speed 1500 RPM, suitable for operation on 415Volts, 3 phase 50 Hz. AC with IP 55 protection for enclosure, horizontal foot mounted type with Class-'F' insulation, conforming to IS-325							
	c) M.S. Fabricated common base plate, coupling, coupling guard, foundation bolts etc as required.							
	d) Suitable cement concrete foundation duly plastered with anti vibration pads. Makes of Pumps: Kirloskar / Mather&Platt. Makes of Motors: Siemens/ ABB/ Kirloskar Including OH & Contractors profit @ 13.615%	1	x	2			409014	818028.00

2	Supplying, installation, testing and commissioning of <b>Diesel driven main</b> fire pump suitable for automatic operation and consisting of following complete in all respect as required						
	a) Horizontal type, multistage, centrifugal, split casing pump of cast iron body & bronze impeller with stainless steel shaft, mechanical seal to ensure a minimum pressure of 3.5 Kg / sq.cm. at highest and farthest outlet at specified flow of 2280 lpm at 70 Mtr. head conforming to IS 1520						
	b) Suitable HP, 1500 RPM water cooled with radiator, diesel engine conforming to relevant BS & IS standard complete with auto starting mechanism, 12 Volts / 24 Volts electric starting equipment, Diesel Tank, exhaust pipe extended upto 1 m. outside pump house duly insulated with 50mm thick glass wool with 1.0mm thick aluminium sheet cladding, residential silencer, instruments and protection as per specification, stop solenoid for auto stop in the event of fault with audio indications, painted with post office red colour etc as required.						
	c) M.S. Fabricated common base plate, coupling, coupling guard, foundation bolts etc as required.						
	d) Suitable cement concrete foundation duly plastered with anti vibration pads. Makes of Pumps: Kirloskar / Mather&Platt. Makes of Motors: Siemens/ ABB/ Kirloskar Including OH & Contractors profit @ 13.615%	1	x	2		658967	1317934.00
						Say Rs.	<b>2135962.00</b>



**MULTI MODAL LOGISTIC PARK, JOGIGHOPA**

FIRE FIGHTING WATER SYSTEM											
ABSTRACT ESTIMATION											
S. No	Description of Item	No			L	B	D	Quantity	Rate	Per	Amount
0	<b>Total EWE Quantity</b>										
	150 mm dia 'B' Class	1	x	1	4500.00	0.75	1.10	3712.50			
	Total EWE Qty							<b>3712.50</b>	<b>Cum</b>		
1	RBR - FNDN-1 - (i-B) - In ordinary soils, by Mechanical means: Earthwork excavation in all kinds of soil for Pipe line trenches as per drawings and technical specifications including setting out, construction of shoring and bracing, removal of stumps and other deleterious material, dressing of sides and bottom as per Technical Specification 304 MORTH and as directed by the departmental officer including protecting the existing utility services wherever it is possible during the execution and taking all precautionary measures in the restricted areas for laying sewer/water lines including diversion of traffic and backfilling in trenches with excavated suitable material and disposal of remaining earth upto a lead of 50 m, including all incidental and operational charges etc., complete for Pipe Lines by mechanical means.										
	EWE Quantity	1	x	1	3712.50	<b>80%</b>		<b>2970.00</b>	<b>Cum</b>	<b>100.80</b>	1 Cum 299376.00
2	RBR - FNDN - 1 - (i-A) In ordinary soils, by Manual means: Earthwork excavation in all kinds of soil for Pipe line trenches as per drawings and technical specifications including setting out, construction of shoring and bracing, removal of stumps and other deleterious material , dressing of sides and bottom as per Technical Specification 304 MORTH and as directed by the departmental officer including protecting the existing utility services wherever it is possible during the execution and taking all precautionary measures in the restricted areas for laying sewer/water lines including diversion of traffic and backfilling in trenches with excavated suitable material and disposal of remaining earth upto a lead of 50 m, including all incidental and operational charges etc., complete for Pipe Lines by manual means.										
	EWE Quantity	1	x	1	3712.50	<b>5%</b>		<b>185.60</b>	<b>Cum</b>	<b>365.12</b>	1 Cum 67766.00
3	BLD-CSTN-2-5 - (13): Earth work excavation in Ordinary rock (not requiring blasting)-Mechanical Means-Upto 3 m depth and depositing on bank for all lifts and with an initial lead of 10m including all operational, incidental, labour charges such as shoring ,sheeting, planking, strutting, etc. complete for finished item of work including seigniorage excluding dewatering charges etc as per SS - 20 B (APSS 308). Ordinary rock (not requiring blasting)-Mechanical Means-Upto 3 m depth										
	EWE Quantity	1	x	1	3712.50	<b>10%</b>		<b>371.30</b>	<b>Cum</b>	<b>126.96</b>	1 Cum 47140.00
4	Excavation in Hard Rock by mechanical means in habitant areas where conventional blasting can not be done for Pipe line trenches as per drawings and technical specifications including setting out, construction of shoring and bracing, removal of stumps and other deleterious material , dressing of sides and bottom as per Technical Specification 305 MoRD / 304 MoRTH and as directed by the departmental officer including protecting the existing utility services wherever it is possible during the execution and taking all precautionary measures in the restricted areas for laying sewer/water pipe lines including diversion of traffic and disposal of rock upto a lead of 50 m, including all incidental and operational charges etc., complete										
	EWE Quantity	1	x	1	3712.50	<b>5%</b>		<b>185.60</b>	<b>Cum</b>	<b>800.26</b>	1 Cum 148528.00
5	Providing , laying, testing & Commissioning of following classes MS pipes conforming to IS 3589 and 1239 including fittings like elbows, tees, flanges, tapers, nuts, bolts, gaskets etc., complete. Makes: Jindal / Hissar / Tata pipes										
	150 mm dia 'B' Class	1	x	1	4500.00			4500.00	Rmt	<b>2045.07</b>	1 Rmt 9202815.00
6	Supplying and fixing single headed Internal / External hydrant valve with instantaneous Gun metal couplings of 63mm dia with Cast iron wheel ISI marked conforming to IS 5290 (Type - A) with blank Gun Metal cap and chain as required. Makes: Newage/ Winco/ Padmini / Safex/Minimax										
	External hydrant	1	x	1	49			49	Nos	<b>8293.90</b>	1 Nos 406401.00
7	Supplying, fixing, testing and commissioning of butterfly valve PN 1.6, with Bronze / Gun metal seat duly ISI marked complete with Nuts, Bolts, Washers, gaskets, conforming to IS 13095 of following sizes as required. Makes: Audco / Kirloskar / BDK / H-Shankar / Leader/ Zolotto / Valtree										
	150mm dia	1	x	1	23			23	Nos	<b>4658.22</b>	1 Nos 107139.00
8	Providing, installation, testing and commissioning of Flat type non - return valve of following sizes confirming to IS: 5312 complete with rubber gasket, GI bolts, nuts, washers etc as required Makes: Audco / Kirloskar / BDK / H-Shankar / Leader/ Zolotto / Valtree										
	150mm dia	1	x	1	2			2	Nos	<b>7498.59</b>	1 Nos 14997.00
9	Manufacture, Supply and delivery of CI Wafer Lug type Butterfly Valves conforming to IS 13095/1991 (Reaffirmed 1998) excluding transportation, CED and taxes etc., complete. Operation done with worm actuator ISI marked Rate at Ex- Factory Makes: Audco / Kirloskar / BDK / H-Shankar / Leader/ Zolotto / Valtree										
	150mm dia	1	x	1	23			23	Nos	<b>7953.05</b>	1 Nos 182920.00

[illegible]

**MULTI MODAL LOGISTIC PARK, JOGIGHOPA**

**FIRE FIGHTING WATER SYSTEM**

**DETAILED ESTIMATION**

S. No	Description of Item	No			L	B	D	Quantity	
0	<b>Total EWE Quantity</b>								
	150 mm dia 'B' Class	1	x	1	4500.00	0.75	1.10	3712.50	
	Total EWE Qty							<b>3712.50</b>	<b>Cum</b>
1	RBR - FNDN-1 - (i-B) - In ordinary soils, by Mechanical means: Earthwork excavation in all kinds of soil for Pipe line trenches as per drawings and technical specifications including setting out, construction of shoring and bracing, removal of stumps and other deleterious material, dressing of sides and bottom as per Technical Specification 304 MORTH and as directed by the departmental officer including protecting the existing utility services wherever it is possible during the execution and taking all precautionary measures in the restricted areas for laying sewer/water lines including diversion of traffic and backfilling in trenches with excavated suitable material and disposal of remaining earth upto a lead of 50 m, including all incidental and operational charges etc., complete for Pipe Lines by mechanical means.								
	% of the EWE Quantity	1	x	1	3712.50	<b>80%</b>		<b>2970.00</b>	Cum
2	RBR - FNDN - 1 - (i-A) In ordinary soils, by Manual means: Earthwork excavation in all kinds of soil for Pipe line trenches as per drawings and technical specifications including setting out, construction of shoring and bracing, removal of stumps and other deleterious material , dressing of sides and bottom as per Technical Specification 304 MORTH and as directed by the departmental officer including protecting the existing utility services wherever it is possible during the execution and taking all precautionary measures in the restricted areas for laying sewer/water lines including diversion of traffic and backfilling in trenches with excavated suitable material and disposal of remaining earth upto a lead of 50 m, including all incidental and operational charges etc., complete for Pipe Lines by manual means.								
	% of the EWE Quantity	1	x	1	3712.50	<b>5%</b>		<b>185.63</b>	Cum
3	BLD-CSTN-2-5 - (13): Earth work excavation in Ordinary rock (not requiring blasting)-Mechanical Means-Upto 3 m depth and depositing on bank for all lifts and with an initial lead of 10m including all operational, incidental, labour charges such as shoring ,sheeting, planking, strutting, etc. complete for finished item of work including seigniorage excluding dewatering charges etc as per SS - 20 B (APSS 308). Ordinary rock (not requiring blasting)-Mechanical Means-Upto 3 m depth								
	% of the EWE Quantity	1	x	1	3712.50	<b>10%</b>		<b>371.25</b>	Cum
4	Excavation in Hard Rock by mechanical means in habitant areas where conventional blasting can not be done for Pipe line trenches as per drawings and technical specifications including setting out, construction of shoring and bracing, removal of stumps and other deleterious material , dressing of sides and bottom as per Technical Specification 305 MoRD / 304 MoRTH and as directed by the departmental officer including protecting the existing utility services wherever it is possible during the execution and taking all precautionary measures in the restricted areas for laying sewer/water pipe lines including diversion of traffic and disposal of rock upto a lead of 50 m, including all incidental and operational charges etc., complete								
	% of the EWE Quantity	1	x	1	3712.50	<b>5%</b>		<b>185.63</b>	Cum
5	Providing , laying, testing & Commissioning of following classes MS pipes conforming to IS 3589 and 1239 including fittings like elbows, tees, flanges, tapers, nuts, bolts, gaskets etc., complete. Makes: Jindal / Hissar / Tata pipes								
	150 mm dia 'B' Class	1	x	1	4500.00			4500.00	Rmt
	ELEC-9.5.19 Page. 272 ( 1800+13.615%)								
6	Supplying and fixing single headed Internal / External hydrant valve with instantaneous Gun metal couplings of 63mm dia with Cast iron wheel ISI marked conforming to IS 5290 (Type - A) with blank Gun Metal cap and chain as required. Makes: Newage/ Winco/ Padmini / Safex/Minimax								

	External hydrant	1	x	1	49			49	Nos
	ELEC-9.5.20 Page. 273 ( 7300+13.615%)								
7	Supplying, fixing, testing and commissioning of butterfly valve PN 1.6, with Bronze / Gun metal seat duly ISI marked complete with Nuts, Bolts, Washers, gaskets, conforming to IS 13095 of following sizes as required. Makes: Audco / Kirloskar / BDK / H-Shankar / Leader/ Zolotto / Valtree								
	150mm dia	1	x	1	2			2	Nos
	ELEC-9.5.21 Page. 273 ( 4100+13.615%)								
8	Providing, installation, testing and commissioning of Flat type non - return valve of following sizes confirming to IS: 5312 complete with rubber gasket, GI bolts, nuts, washers etc as required Makes: Audco / Kirloskar / BDK / H-Shankar / Leader/ Zolotto / Valtree								
	150mm dia	1	x	1	2			2	Nos
	ELEC-9.5.22 Page. 273 ( 6600+13.615%)								
9	Manufacture, Supply and delivery of CI Wafer Lug type Butterfly Valves conforming to IS 13095/1991 (Reaffirmed 1998) excluding transportation, CED and taxes etc., complete. Operation done with worm actuator ISI marked Rate at Ex- Factory Makes: Audco / Kirloskar / BDK / H-Shankar / Leader/ Zolotto / Valtree								
	150mm dia	1	x	1	4			4	Nos
	ELEC-9.5.23 Page. 273 ( 7000+13.615%)								
10	Supplying and fixing First -Aid Hose Reel with MS construction spray painted in Post office Red, Conforming to Is 884 with upto date mendments, complete with the following as required. a) 36.6 Mtr Long 20mm (Nominal internal) dia water hose Thermoplastic / Textile reinforced / Rubber braided / Polypropylene Type - 2 as per IS:12585 Makes: Eversafe/ Reliance/ Newage/ SRI / Safex b) 20mm (Nominal internal) dia gun metal globe valve and nozzle. Makes: Newage/ Winco/ Padmini / Safex. c) Drum and brackets for fixing the equipments on wall. d) Connections from riser with 25mm dia stop valve (gun metal) & MS pipe.	1	x	1	49			49	Nos
	ELEC-9.5.28 Page. 274 ( 6700+13.615%)								
11	Supplying and fixing of hose cabinet of size 750mm X 600mm x 250mm made of No 16 gauge SWG CRCA sheet with 6mm thick glazed glass door including necessary locking arrangement suitable to accommodate 2 Nos 15 mtr long Hose pipe, 1 No branch pipe, mounted on wall OR raised brick platform and duly painted with Post office red externally and white internally with synthetic enamel paint complete in all respect, for external hydrant as required.	1	x	1	49			49	Nos
	ELEC-9.5.29 Page. 274 ( 2900+13.615%)								
	<b>Sub-Total</b>								