



Name of Work: Preliminary cost for AETL CETP at Atchutapuram

Upgration of Existing Common Effluent Treatment Plant (CETP) of 1.5 MLD to 2.00 MLD

GENERAL ABSTRACT

S. No	Description		Amount (Rs.)
<b>A</b>	<b>Construction Cost</b>		<b>Present implementation</b>
1	Civil works		12,12,86,832.09
2	Electro Mechanical works		60,77,41,323.92
	<b>Subtotal amount Construction works (A)</b>		<b>72,90,28,156.01</b>
<b>B</b>	<b>Other LS Provisions</b>		
i	Seigniorage Charges		14,04,966.19
ii	NAC @ 0.1%	0.1%	7,29,028.16
iii	Tender Premium @ 5%	5%	3,64,51,407.80
iv	Price Adjustment and change in SoR @ 5%	5%	3,64,51,407.80
v	Quality Control @ 1%	1.00%	72,90,281.56
vi	PMC Consultant @ 2%	2%	1,45,80,563.12
Vii	Unforeseen		2,53,42,445.53
Viii	For Contengency @ 1.5%	2%	1,09,35,422.34
	<b>Total value of work ( A+B ( i to viii ))</b>		<b>13,31,85,522.50</b>
<b>C</b>	<b>GST 18%</b>	18.0%	13,77,86,321.49
	<b>Grand Total - (A+B+C)</b>		<b>1,00,00,00,000.00</b>
	<b>Say Cr</b>		<b>100.00</b>

  
Sr. Project Engineer  
Anakapalli zone

  
B. V. S. Lakshmi  
Env. Engg  
Anakapalli

  
D. M. (E)  
Anakapalli

  
ZM  
Anakapalli zone

## Name of Work: Preliminary cost for AETL CETP at Atchutapuram

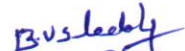
## Upgradation of Existing Common Effluent Treatment Plant (CETP) of 1.5 MLD to 2.00 MLD

## Abstract Sheet

S. No	Description of Item	Unit	Quantity	Unit Rate (In Rs).	Total amount in Rs.
1	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).	Cum	2703.95	127.10	343671.95
2	Plain Cement concrete (1:2:4) using 40 mm metal with Concrete mixture including all labour charges, hire charges of all T&P, all taxes etc complete for the finished item of work as directed by the Engineer - In - Charge. All work up to plinth level.	Cum	416.03	7,419.39	3086678.70
3	Supply and placing of the Design Mix Concrete of M35 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 but excluding cost of steel and its fabrication charges for finished item of work and including all labour charges, hire charges of all T&P, all taxes etc complete for the finished item of work as directed by the Engineer - In - Charge. FOUNDATIONS, PLINTH, PEDESTALS (Below Plinth)	Cum	2770.56	12,558.00	34792670.50
4	Supply and placing of the Design Mix Concrete of M35 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 but excluding cost of steel and its fabrication charges for finished item of work and including all labour charges, hire charges of all T&P, all taxes etc complete for the finished item of work as directed by the Engineer - In - Charge. COLUMNS, LINTELS, WATER TANKS, RCC WALLS IN BUILDINGS				
i	Column	Cum	202.60	14,978.00	3034557.78
iii	wall	Cum	968.58	12,929.00	12522796.68
iii	Beam	Cum	178.29	12,800.00	2282158.17
iv	Stair Case	Cum	24.72	8,592.00	212383.93
5	Supply, Fitting and Placing TMT bar reinforcement (Fe 500) including decoiling, bending, cracking and tying them after placing in position as directed by the Engineer-in-charge including cost and conveyance of steel and binding wire all taxes labour charges for all operations etc., complete for finished item of work as directed by the Engineer - In- Charge and as per Technical Specification 1100 & 1600 MORTH	MT	412.92	82,560.00	34090352.04

6	Providing anticorrosive treatment to HYSD bars with FUSION BONDED EPOXY COATING (FBEC) confirming to IS13620:1993 at approved plant including testing of coating as per relevant IS, before bringing the coated bars on site but excluding To & Fro transportation of bars for sending at plant site etc. complete, for HYSD bars	MT	412.92	16,019.72	66,14,798.01
7	Plastering with CM (1:4), 12 mm thick including all labour charges, hire charges of all T&P, all taxes etc complete for the finished item of work as directed by the Engineer - In - Charge.	Sqm	6967.88	225.50	1571257.26
8	Providing Acid / Alkali Resistance Tiles as per the requirement including labour, material, conveyance of all items as per the direction of Engineer in charge .	Sqm	9034.13	1,637.70	14795186.51
9	Supplying, fabricating and fixing stainless steel hand railing as per approved drawing with stainless steel sections conforming to Grade 304 for baluster, top and intermediate horizontal members including SS heavy floor flange, anchor plate, anchor fasteners, grouting, SS supports, SS base plates, SS counter sunk screws, stainless steel welding, grinding, buffing, polishing, lacquer finishing, to present seamless finish, all of make approved by engineer-in-charge including cost and conveyance of all material to site, all labour charges, all taxes, all incidental charges, T&P and their operational charges etc., complete for Finished item of work.	Kg	7842.46	760.40	59,63,409.63
12	Horticulture operations including 300 earthfilling, grassing, tree plantation/shrubs and plotted plants etc.,	Sqm	4208.88	469.70	19,76,910.94
Total					12,12,86,832.09

  
 Sr. Project Engineer

  
 Bus Lecky  
 Env. Engg

  
 D.R.(E)

  
 E.M.

**Name of Work: Preliminary cost for AETL CETP at Atchutapuram**

**Upgration of Existing Common Effluent Treatment Plant (CETP) of 1.5 MLD to 2.00 MLD**

**Seinorage Charges**

S. No	Description of Item	Unit	Quantity	Unit Rate (In Rs).	Total amount in Rs.
<b>A</b>	<b>Civil Items</b>				
1	Plain Cement concrete (1:2:4) using 40 mm metal with Concrete mixture including all labour charges, hire charges of all T&P, all taxes etc complete for the finished item of work as directed by the Engineer - In - Charge. All work up to plinth level.	Cum	416.03	314.55	130861.73
2	Supply and placing of the Design Mix Concrete of M30 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 but excluding cost of steel and its fabrication charges for finished item of work and including all labour charges, hire charges of all T&P, all taxes etc complete for the finished item of work as directed by the Engineer - In - Charge. FOUNDATIONS, PLINTH, PEDESTALS (Below Plinth)	Cum	4144.75	279.60	1158873.12
3	Plastering with CM (1:4), 12 mm thick including all labour charges, hire charges of all T&P, all taxes etc complete for the finished item of work as directed by the Engineer - In - Charge.	Sqm	6967.88	16.54	115231.34
	<b>Total</b>				<b>14,04,966.19</b>

*[Signature]*  
Sr. Project Engineer  
Anatapalli

*[Signature]*  
Sr. Sdly  
Env. Engg  
Anatapalli

*[Signature]*  
ZM(E)  
Anatapalli

*[Signature]*  
ZM  
Anatapalli

**AETL CETP at Atchutapuram**  
**ment Plant (CETP) of 1.5 MLD to 2.0 MLD**  
**mechanical items**

Make	Unit cost	Transportation (3%)	Erection (10%)	Contractors Profit (10%)	Total Cost
KSB/ Ebara/ Jhonson	200000.00	6000.00	20000.00	20000.00	984000.00
Unitop Aquacare/Equivalent	18400000.00	552000.00	1840000.00	1840000.00	45264000.00
Unitop Aquacare/Equivalent	82500000.00	2475000.00	8250000.00	8250000.00	202950000.00
Unitop Aquacare/Equivalent	4900000.00	147000.00	490000.00	490000.00	36162000.00
KSB/ Ebara/ Jhonson	230000.00	6900.00	23000.00	23000.00	565800.00
Automatic	55000000.00	1650000.00	5500000.00	5500000.00	135300000.00
KSB/ Ebara/ Jhonson	200000.00	6000.00	20000.00	20000.00	492000.00
KSB/ Ebara/ Jhonson	200000.00	6000.00	20000.00	20000.00	492000.00
Euroteck/Equivalent	925926.00	27777.78	92592.60	92592.60	4555555.92
Netzsch/ Roto/ Jhonson	2500000.00	75000.00	250000.00	250000.00	6150000.00
Euroteck	3765000.00	112950.00	376500.00	376500.00	55571400.00
Netzsch/ Roto/ Jhonson	200000.00	6000.00	20000.00	20000.00	492000.00
Fabrication	40000.00	1200.00	4000.00	4000.00	49200.00
Fabrication	3279600.00	98388.00	327960.00	327960.00	4033908.00
Fabrication	40000.00	1200.00	4000.00	4000.00	49200.00
Fabrication	2733000.00	81990.00	273300.00	273300.00	3361590.00
Netzsch/ Roto/ Jhonson	150000.00	4500.00	15000.00	15000.00	369000.00
roteck/Whriler/ Pure Centrifuge	4312000.00	129360.00	431200.00	431200.00	10607520.00
KSB/ Ebara/ Jhonson	200000.00	6000.00	20000.00	20000.00	738000.00
Everest/ TMVT	175000.00	5250.00	17500.00	17500.00	430500.00
	1000000.00	30000.00	100000.00	100000.00	1230000.00
Tank: MS	20000.00	600.00	2000.00	2000.00	24600.00
rp: Prominent/ Positive metering	15000.00	450.00	1500.00	1500.00	36900.00
Tank: MS	20000.00	600.00	2000.00	2000.00	49200.00
Tank: MS	20000.00	600.00	2000.00	2000.00	49200.00
Tank: MS	20000.00	600.00	2000.00	2000.00	24600.00
	40000.00	1200.00	4000.00	4000.00	246000.00
Tank: Sintex	5000.00	150.00	500.00	500.00	18450.00
Tank: Sintex	5000.00	150.00	500.00	500.00	18450.00
Tank: Sintex	5000.00	150.00	500.00	500.00	18450.00
	40000.00	1200.00	4000.00	4000.00	442800.00
rp: Prominent/ Positive metering	15000.00	450.00	1500.00	1500.00	73800.00
rp: Prominent/ Positive metering	20000.00	600.00	2000.00	2000.00	49200.00
rp: Prominent/ Positive metering	15000.00	450.00	1500.00	1500.00	73800.00
rp: Prominent/ Positive metering	20000.00	600.00	2000.00	2000.00	49200.00
rp: Prominent/ Positive metering	15000.00	450.00	1500.00	1500.00	73800.00
rp: Prominent/ Positive metering	20000.00	600.00	2000.00	2000.00	49200.00
	44000000.00	1320000.00	4400000.00	4400000.00	54120000.00
	31200000.00	936000.00	3120000.00	3120000.00	38376000.00
	500000.00	0.00	0.00	0.00	500000.00
	500000.00	0.00	0.00	0.00	500000.00
	1200000.00	0.00	0.00	0.00	1200000.00
	200000.00	0.00	0.00	0.00	200000.00
	200000.00	0.00	0.00	0.00	200000.00
	1500000.00	0.00	0.00	0.00	1500000.00
					<b>60,77,41,323.92</b>

**Name of Work: Preliminary cost for AETL CETP at Atchutapuram**

**Upgration of Existing Common Effluent Treatment Plant (CETP) of 1.5 MLD to 2.00 MLD**

**Measurement Sheet - Civil Components**

S. No	Description of Item	Unit	Nos	Length	Breadth / Width	Depth	Quantity
<b>1</b>	<b>De-Nitrification Tank</b>	<b>Nos</b>	<b>1</b>				
	Earthwork	Cum	1	37.550	17.250	0.700	453.416
	PCC	Cum	1	37.350	17.050	0.100	63.682
	Base RCC M30	Cum	1	37.350	17.050	0.500	318.409
	Walls: long	Cum	2	36.000	0.350	6.500	163.800
	Walls: short	Cum	2	0.350	15.700	6.500	71.435
	RCC Column	Cum	28	0.400	0.400	9.700	43.456
	Beam	Cum	1	327.600	0.350	0.350	40.131
	Base Slab	Cum	1	36.000	16.400	0.200	118.080
	Steel (Tor)	Kg	1	100.000	kg per cum of RCC		75531.075
	Shuttering for Column	Sqm	28	0.400	0.400	9.350	41.888
	Shuttering for Long Beams	Sqm	1	668.400	0.350	0.350	81.879
	Shuttering: Outer	Sqm	2	104.100	1.000	6.500	1353.300
	Shuttering: Inner walls	Sqm	2	103.400	1.000	6.500	1344.200
	Plastering: long walls	Sqm	2	36.350	1.000	6.500	472.550
	Plastering: short walls	Sqm	2	1.000	15.700	6.500	204.100
	Top & flooring	Sqm	1	36.000	15.700	1.000	565.200
	Tiling						1909.400
<b>2</b>	<b>Aeration Tank -2</b>		<b>1</b>	<b>(1Nos)</b>			
	Earthwork	Cum	1	37.550	74.550	0.700	1959.547
	PCC	Cum	1	37.350	74.350	0.100	277.697
	Base RCC M30	Cum	1	37.350	74.350	0.500	1388.486
	Walls: long	Cum	2	36.000	0.350	6.500	163.800
	Walls: short	Cum	1	0.350	73.000	6.500	166.075
	RCC Column	Cum	84	0.400	0.400	9.700	130.368
	Beam	Cum	1	947.900	0.350	0.350	116.118
	Base Slab	Cum	1	36.000	73.700	0.200	530.640
	Steel (Tor)	Kg	1	100.000	kg per cum of RCC		249548.700
	Shuttering for Column	Sqm	84	0.400	0.400	9.350	125.664
	Shuttering for Beams	Sqm	1	2529.900	0.350	0.350	309.913
	Shuttering: Outer	Sqm	2	218.700	1.000	6.500	2843.100
	Shuttering: Inner walls	Sqm	2	218.000	1.000	6.500	2834.000
	Plastering: long walls	Sqm	2	36.350	1.000	6.500	472.550
	Plastering: short walls	Sqm	2	1.000	73.000	6.500	949.000
	Top & flooring	Sqm	1	36.000	73.000	1.000	2628.000
	Tiling						5462.000
<b>3</b>	<b>Secondary clarifier</b>		<b>1</b>				
	Earthwork	Cum	1	240.625	1.000	0.550	132.344
	PCC	Cum	1	240.625	1.000	0.150	36.094

	Base RCC M30	Cum	1	250.346	1.000	0.400	100.139
	Walls: long	Cum	1	112.200	0.350	6.500	255.255
	Walls: short	Cum	1	1.000	1.000	1.000	1.000
	RCC Column	Cum	8.0	0.400	0.400	9.900	12.672
	Beam	Cum	1	112.200	0.300	0.300	10.098
	Base Slab	Cum	1	250.346	1.000	0.500	125.173
	Steel (Tor)	Kg	1	100.000	kg per cum of RCC		50433.663
	Shuttering for Column	Sqm	8.0	0.400	0.400	9.600	12.288
	Shuttering for Beams	Sqm	1	110.000	0.300	0.300	9.900
	Shuttering: Outer	Sqm	1	112.200	1.000	6.500	729.300
	Shuttering: Inner walls	Sqm	1	110.000	1.000	6.500	715.000
	Plastering: long walls	Sqm	1	110.000	1.000	6.500	715.000
	Top & flooring	Sqm	1	240.625	1.000	1.000	240.625
	Tiling						955.625
<b>4</b>	<b>Flash mixing Tank</b>		<b>1</b>				
	Earthwork	Cum	1	2.450	2.450	0.300	1.801
	PCC	Cum	1	2.250	2.250	0.100	0.506
	Base RCC M30	Cum	1	2.050	2.050	0.200	0.841
	Walls: long	Cum	2	1.600	0.200	2.100	1.344
	Walls: short	Cum	2	0.200	1.200	2.100	1.008
	RCC Column	Cum	4	0.300	0.300	5.200	1.872
	Beam	Cum	4	3.800	0.300	0.300	1.368
	Base Slab	Cum	1	1.200	1.200	0.300	0.432
	Steel (Tor)	Kg	1	100.000	kg per cum of RCC		686.450
	Shuttering for Column	Sqm	4	6.240	1.000	1.000	24.960
	Shuttering for Beams	Sqm	4	11.000	1.000	0.300	13.200
	Shuttering: Outer	Sqm	2	5.200	1.000	2.100	21.840
	Shuttering: Inner walls	Sqm	2	4.800	1.000	2.100	20.160
	Plastering: long walls	Sqm	2	1.400	1.000	2.100	5.880
	Plastering: short walls	Sqm	2	1.000	1.200	2.100	5.040
	Top & flooring	Sqm	1	1.200	1.200	1.000	1.440
	Tiling						21.600
<b>5</b>	<b>Teritary Clariflocullator</b>		<b>1</b>				
	Earthwork	Cum	1	165.196	1.000	0.500	82.598
	PCC	Cum	1	165.196	1.000	0.100	16.520
	Base RCC M30	Cum	1	173.268	1.000	0.400	69.307
	Walls: long	Cum	1	93.343	0.350	3.500	114.345
	Walls: short	Cum	1	1.000	1.000	1.000	1.000
	RCC Column	Cum	8	0.400	0.400	6.500	8.320
	Beam	Cum	1	93.343	0.300	0.300	8.401
	Base Slab	Cum	1	173.268	1.000	0.300	51.980
	Steel (Tor)	Kg	1	100.000	kg per cum of RCC		25335.323

	Shuttering for Column	Sqm	8	0.400	0.400	6.200	7.936
	Shuttering for Beams	Sqm	1	91.143	0.300	0.300	8.203
	Shuttering: Outer	Sqm	1	93.343	1.000	3.500	326.700
	Shuttering: Inner walls	Sqm	1	91.143	1.000	3.500	319.000
	Plastering: long walls	Sqm	1	91.143	1.000	3.500	319.000
	Plastering: short walls	Sqm	1	165.196	1.000	1.000	165.196
	Top & flooring	Sqm	1	14.500	1.000	1.000	14.500
	Tiling						333.500
<b>6</b>	<b>Volute Press Platform</b>		<b>1</b>				
	Earthwork	Cum	1	7.800	7.800	0.450	27.378
	PCC	Cum	1	7.800	7.800	0.150	9.126
	Base Slab	Cum	1	7.500	7.500	0.300	16.875
	Steel (Tor)	Kg	1	100.000	kg per cum of RCC		2600.100
<b>7</b>	<b>PSF feed Sump</b>		<b>1</b>				
	Earthwork	Cum	1	9.250	9.250	0.400	34.225
	PCC	Cum	1	9.050	9.050	0.100	8.190
	Base RCC M30	Cum	1	8.850	8.850	0.300	23.497
	Walls: long	Cum	2	8.400	0.200	4.500	15.120
	Walls: short	Cum	2	0.200	8.000	4.500	14.400
	RCC Column	Cum	9	0.300	0.300	7.300	5.913
	Beam	Cum	1	24.200	0.300	0.300	2.178
	Base Slab	Cum	1	8.000	8.000	0.300	19.200
	Steel (Tor)	Kg	1	100.000	kg per cum of RCC		8030.775
	Shuttering for Column	Cum	9	8.760	1.000	1.000	
	Shuttering for Beams	Sqm	2	65.400	1.000	0.300	39.240
	Shuttering: Outer	Sqm	2	32.400	1.000	4.500	291.600
	Shuttering: Inner walls	Sqm	2	32.000	1.000	4.500	288.000
	Plastering: long walls	Sqm	2	8.200	1.000	4.500	73.800
	Plastering: short walls	Sqm	2	1.000	8.000	4.500	72.000
	Top & flooring	Sqm	1	8.000	8.000	1.000	64.000
	Tiling						352.000
<b>8</b>	<b>PSF Platform</b>		<b>1</b>				
	Earthwork	Cum	1	5.300	5.300	0.450	12.641
	PCC	Cum	1	5.300	5.300	0.150	4.214
	Base RCC M30	Cum	1	5.000	5.000	0.300	7.500
	Steel (Tor)	Kg	1	100.000	kg per cum of RCC		750.000
	<b>Stair Case</b>						
<b>A</b>	<b>De-Nitrification Tank</b>						
	Steps	65	1.2	0.22	0.15	2.57	
	Waist slab	3	3.2	1.2	0.15	1.73	

	Mid landing	3	2.5	1	0.15	1.13	
<b>2</b>	Aeration Tank -2						
	Steps	65	1.2	0.22	0.15	2.57	
	Waist slab	3	3.2	1.2	0.15	1.73	
	Mid landing	3	2.5	1	0.15	1.13	
<b>3</b>	Secondary clarifier						
	Steps	66	1.2	0.22	0.15	2.61	
	Waist slab	3	3.2	1.2	0.15	1.73	
	Mid landing	3	2.5	1	0.15	1.13	
<b>5</b>	Teritiary Clariflocullator						
	Steps	43	1.2	0.22	0.15	1.70	
	Waist slab	2	3.2	1.2	0.15	1.15	
	Mid landing	2	2.5	1	0.15	0.75	
<b>6</b>	PSF feed Sump						
	Steps	49	1.2	0.22	0.15	1.94	
	Waist slab	3	3.2	1.2	0.15	1.73	
	Mid landing	3	2.5	1	0.15	1.13	
	Total					<b>24.72</b>	
<b>F</b>	<b>Railing</b>						
Supplying, fabricating and fixing stainless steel hand railing as per approved drawing with stainless							
	For 1 meter	nos	length		kg/length		
	12 mm dia S.S. hollow pipe - horizontal	2	2.7		0.39	2.11	
	50 mm dia S.S. hollow pipe - horizontal	2	1		1.79	3.58	
	50 mm dia S.S. hollow pipe - vertical	2	1.9		1.79	6.80	
	<b>total quantity for 1 meter</b>					<b>12.49</b>	<b>kgs</b>
	<b>Tank Railing</b>						
	De-Nitrification Tank		104.10				
	Aeration Tank -2		218.70				
	PSF feed Sump		32.40				
	<b>Stair Case</b>						
	De-Nitrification Tank		62.00				
	Aeration Tank -2		62.00				
	Secondary clarifier		62.00				
	Teritiary Clariflocullator		37.20				
	PSF feed Sump		49.60				
	<b>Total</b>		<b>628.00</b>			<b>7842.464</b>	<b>Kgs</b>

J. J. J.  
Sr. Project Engineer  
Anatapalli

B. V. S. Reddy  
Env. Engg  
Anatapalli

D. R. M. (E)  
Anatapalli

A. J. J.  
2/14  
Anatapalli

Name of Work: Preliminary cost for AETL CETP at Atchutapuram																						
Upgration of Existing Common Effluent Treatment Plant (CETP) of 1.5 MLD to 2.00 MLD																						
Civil Sizing																						
S.No	Structure	Unit	Vol (Cum) / Area (Sqm)	Nos	Length	Breadth	Depth	FB	Total Height	Wall thick	Wall offset	Base Raft/U G Tank	Base Slab	PCC thick	Exact Offset	Column			Beam			Height from Ground level
																b	D	L	b	D	L	
<b>A</b>	<b>LTDIS Stream-2.0 MLD</b>																					
1	De-Nitrification Tank	Cum	3673.80	1	36.000	15.700	6.000	0.500	6.500	0.350	0.225	0.500	0.200	0.100	0.100	0.400	0.400	9.700	0.350	0.350	104.10	3.00
2	Aeration Tank -2	Cum	17082.00	1	36.000	73.00	6.000	0.500	6.50	0.350	0.225	0.500	0.200	0.100	0.100	0.400	0.400	9.70	0.350	0.350	218.70	3.00
3	Secondary clarifier	Cum	1564.06	1	17.500		6.000	0.500	6.50	0.350	0.250	0.400	0.500	0.150	0.100	0.400	0.400	9.90	0.300	0.300	35.70	2.90
4	Flash mixing Tank	Cum	3.02	1	1.200	1.200	1.600	0.500	2.10	0.200	0.225	0.200	0.300	0.100	0.100	0.300	0.300	5.20	0.300	0.300	5.20	2.80
5	Tertiary Clariflocullator	Cum	578.19	1	14.500		3.000	0.500	3.50	0.350	0.225	0.400	0.300	0.100	0.100	0.400	0.400	6.50	0.300	0.300	29.70	2.70
6	Volute Press Platform	Sqm	56.25	1	7.500	7.500	0.000	0.000	0.00	0.000	0.000	0.300	0.000	0.150	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
7	PSF feed Sump	Cum	288.00	1	8.000	8.000	4.000	0.500	4.50	0.200	0.225	0.300	0.300	0.100	0.100	0.300	0.300	7.30	0.300	0.300	32.40	2.50
8	PSF Platform	Sqm	25.00	1	5.000	5.000	0.000	0.000	0.00	0.000	0.000	0.300	0.000	0.150	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

*[Signature]*  
Sr. Project Engineer  
Atkapalli

*[Signature]*  
Brs. Sadeep  
Env. Engg  
Atkapalli

*[Signature]*  
Atkapalli

*[Signature]*  
Atkapalli

## Name of Work: Preliminary cost for AETL CETP at Atchutapuram

## Upgration of Existing Common Effluent Treatment Plant (CETP) of 1.5 MLD to 2.00 MLD

## Rate Analysis - Civil Components

S. No	Description of Item	Unit	Quantity	Unit Rate (In Rs).	Total amount in Rs.
1	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). Ordinary soils-Mechanical Means-Upto 3 m depth including all labour charges, all taxes, Hire & Operational charges of all T&P complete for Finished item of work as directed by the Engineer - In Charge				
	BLD-CSTN-2-2				
	Unit = 1 Cum				
	Taking output = 240 cum				
	<b>a) Labour</b>				
	Mate	day	-		
	Mazdoor (Unskilled)	day	8.32	560.00	4659.20
					<b>4659.20</b>
	<b>b) Machinery</b>				
	Hydraulic Excavator 1 cum bucket capacity	hour	6.00	3561.50	21369.00
					<b>21369.00</b>
	<b>c&amp;d) Overheads &amp; Contractors Profit</b>		13.615%	26028.20	3543.74
	<b>Area allowance</b>		20.000%		931.84
	Cost for 240 cum = a+b+c+d				30503.78
	Rate per 1 Cum = (a+b+c+d)/240				<b>127.10</b>
2a	Plain Cement concrete (1:2:4) using 40 mm metal with Concrete mixture including all labour charges, hire charges of all T&P, all taxes etc complete for the finished item of work as directed by the Engineer - In - Charge. All work up to plinth level.				
	BLD-CSTN-3-7				
	Unit = 1cum				
	<b>A. MATERIALS</b>				
	Cement	kg	320.00	4.22	1350.40
	Coarse aggregate 40 mm	cum	0.90	1976.90	1779.21
	Fine aggregate (Sand)	cum	0.45	2680.90	1206.41
	Water (including for curing)	kl	1.20	99.00	118.80
					<b>4454.82</b>
	<b>B. MACHINERY</b>				
	Concrete Mixer 10 / 7 cft (0.2 / 0.8 cum) capacity	hour	1.00	692.70	692.70
					<b>692.70</b>
	<b>C. LABOUR</b>				
	Mason 1st class	day	0.10	670.00	67.00
	Mazdoor (Unskilled)	day	1.98	560.00	1108.80
					<b>1175.80</b>
	<b>D. Overheads &amp; Contractors Profit</b>		13.615%	6323.32	860.92
	Area allowance		20.000%		235.16
	Rate for 1 cum = a+b+c+d				<b>7419.39</b>
3	Supply and placing of the Design Mix Concrete of M30 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 but excluding cost of steel and its fabrication charges for finished item of work and including all labour charges, hire charges of all T&P, all taxes etc complete for the finished item of work as directed by the Engineer - In - Charge.				

	BLD-CSTN-3-14				
A	FOUNDATIONS, PLINTH, PEDESTALS (Below Plinth)				
	Unit : Cum				
	<b>A) Labour</b>				
	Cement	kg	400	4.22	1688.00
	Mason 1st class	day	0.13	670.00	89.11
	Mason 2nd class	day	0.27	605.00	161.54
	Mazdoor unskilled (Man & Woman)	day	4.60	560.00	2576.00
					<b>4514.65</b>
	<b>B) Machinery</b>				
	Weigh Batcher Hire Charges (Machine Mixing charges)	hour	1.33	1281.10	1707.71
	Vibrator hire charges	hour	1.33	252.60	336.72
	Water (including for curing)	kl	1.20	99.00	118.80
					<b>2163.22</b>
	<b>C) Material</b>				
	20mm HBG graded metal	cum	0.80	1976.90	1581.52
	Sand	cum	0.40	2564.90	1025.96
					0.00
					<b>2607.48</b>
					<b>9285.35</b>
	<b>Footings</b>				
	Basic Rate				<b>9285.35</b>
	Hire Charges for Centering & Scaffolding				
	Material hire charges	301.00	Cum		301.00
	labour component	672.00	Cum		672.00
	area allowance	0.00			0.00
	Add Contractors Profit & overheads	13.615%		10258.35	1396.67
	Area allowance	20.00%			902.93
	<b>Total</b>				<b>12558.00</b>
B	COLUMNS, LINTELS, WATER TANKS, RCC WALLS IN BUILDINGS				
	Unit : Cum				
	<b>A) Labour</b>				
	Mason 1st class	day	0.167	670.00	111.89
	Mason 2nd class	day	0.167	605.00	101.04
	Mazdoor unskilled (Man & Woman)	day	5.60	560.00	3136.00
					<b>3348.93</b>
	<b>B) Machinery</b>				
	Weigh Batcher Hire Charges (Machine Mixing charges)	hour	1.33	1281.10	1707.71
	Vibrator hire charges	hour	1.33	252.60	336.72
	Water (including for curing)	kl	1.20	99.00	118.80
					<b>2163.22</b>
	<b>C) Material</b>				
	20mm HBG graded metal	cum	0.80	1976.90	1581.52
	Sand	cum	0.40	2564.90	1025.96
	Cement	kg	400.00	4.22	1688.00
					<b>4295.48</b>
					<b>9808.00</b>
i	<b>COLUMNS</b>				<b>9808.00</b>
	Basic Rate				<b>9808.00</b>
	Hire Charges for Centering & Scaffolding	2786.00	Cum		2786.00
	Add Contractors Profit & overheads	13.615%		12594.00	1714.67
	Area allowance	20.00%			669.79
	<b>Total</b>				<b>14978.46</b>
	Rate per Cum				<b>14978.00</b>
ii	<b>RCC wall</b>				<b>9808.00</b>
	Basic Rate				<b>9808.00</b>
	Hire Charges for Centering & Scaffolding	982.00	Cum		982.00
	Add Contractors Profit & overheads	13.615%		10790.00	1469.06
	Area allowance	20.00%			669.79