

Rough cost estimate for the civil work for the Bio Floc Aquaculture System at RRTC Talwara

S.No.	Description	Nos.	Length	Width	Height	Quantity(ft.)	Quantity(m.)	Rate/unit	Amount
1/6.6	Earth work in excavations, trenches etc. in all kinds of soil where pick jumper work is not involved and not exceeding 2.0 metres depth including dressing of bottom and sides of trenches, stacking the excavated soil clear from the edge of excavation & subsequent filling around masonry in 15cm layers with compaction including disposal of all surplus soil as directed within a lead of 30 meters.								
	For Bio Floc Walls	2	21	2	2.5	210.00 c-ft			
	For Columns	2	19	2	2.5	190.00 c-ft			
	For Bio Floc Platform Round	10	5	5	5	1250.00 c-ft			
	For Hoddy	2	48	1.5	1.5	216.00 c-ft			
	For Shelves	1	5	6	4.5	135.00 c-ft			
		3	3	1.5	1.5	20.25 c-ft			
						2021.25 c-ft	57.20 cu-m	@Rs182.00/cu-m	Rs 10410.00
	Cement concrete 1:8:16								
	With stone aggregate 40mm gauge								
2/10.6	mixing by mechanical means using concrete mixer volumetric type								
	For Bio Floc Walls	2	21	2	0.3	25.20 c-ft			
	For Columns	2	19	2	0.3	22.80 c-ft			
	For Bio Floc Platform Round	10	5	5	0.3	75.00 c-ft			
	For Hoddy	2	48	1.5	0.3	43.20 c-ft			
	For Shelves	1	5	6	0.3	9.00 c-ft			
		3	3	1.5	0.3	4.05 c-ft			
						179.25 c-ft	5.07 cu-m	@Rs3127.00/cu-m	Rs 15854.00
	First class burnt brick work laid in cement sand mortar 1:5 in foundation and plinth								
	For Bio Floc Walls	2	36	1.5	0.5	54.00 c-ft			
3/11.5	Upto Plinth Beam	2	36	1.125	0.5	40.50 c-ft			
	For Bio Floc Walls	2	36	0.75	2	108.00 c-ft			
		2	23	1.5	0.5	34.50 c-ft			
	Upto Plinth Beam	2	23	1.125	0.5	25.88 c-ft			
	For Bio Floc Unit Round Platform	2	23	0.75	2	69.00 c-ft			
	Upto FFL	2	48	1.125	0.5	54.00 c-ft			
	For Shelves	2	48	0.75	2	144.00 c-ft			
		3	3	1.125	0.5	5.06 c-ft			
	For Hoddy	3	3	0.75	1	6.75 c-ft			
		4	4	1.5	0.5	12.00 c-ft			
		4	4	1.125	0.5	9.00 c-ft			
		4	4	0.75	3.5	42.00 c-ft			
						604.69 c-ft	17.11 cu-m	@Rs5013.00/cu-m	Rs 85772.00
						Difference of Bricks	8213 nos.	@Rs719.93/1000	Rs 5913.00

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Vertical (5x2)	10	1.21	1	1	12.10 r-ft		
Vertical (5x2)	10	0.71			7.10 r-ft		
Vertical (5x2)	10	0.33			3.30 r-ft		
Inclined (5x2)	10	5.375			53.75 r-ft		
Inclined (5x2)	10	4.58			45.80 r-ft		
Inclined (5x2)	10	3.08			30.80 r-ft		
					184.90 r-ft		
Weight 3.380kg/meter					56.36 rmtr		
					190.50 Kg	1.91 qtl	
Base Plate (16mm thick) (12"x12")	10	1	1		10.00 sq-ft		
					0.93sq-m		
Weight 126kg/Sq-m					117.18 Kg	1.17 qtl	
Flat 75x6 (5x4)	20	1			20.00 r-ft		
Weight 3.53kg/meter					6.10 rmtr		
					21.53 Kg	0.22 qtl	
Purlins (75x40)	10	45			450.00 r-ft		
Weight 7.41kg/meter					137.16 rmtr		
					1016.36 Kg	10.16 qtl	
Cleat 75x75x6 (10x5)	50	0.5			25.00 r-ft		
Weight 6.8kg/meter					7.62 rmtr		
					51.82 Kg	0.52 qtl	
Anchor Bolt (2'-6" Long)							
Weight @ 1.40kg/each	40				40. Nos.		
					56.00 Kg	0.56 qtl.	
						20.67 qtl	
Difference in rate in addition as per AC Slip 4						@Rs10327.00/qtyl	Rs 213412.00
						@Rs 373.30 /qtyl	Rs 7714.00

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Rough cost estimate for electrical work for the Bio Floc aquaculture system at RRTC Talwara

Sr. No.	CSR Ref	Description of items	Qty	Unit	Rate/Unit	Premium	Rate with Premium	Amount
1	34.07A	SURFACE PVC CONDUIT PIPE WIRING SYSTEM WITH MODULAR SWITCHES:						
	(i)	Wiring fan point (Without fan box)	2	Nos.	846	25%	1057.5	2115.00
	(ii)	Wiring light point	4	Nos.	540	25%	675	2700.00
	(iv)	Wiring 6Amp. wall socket point	1	Nos.	469	25%	586.25	586.25
	(v)	Wiring 6Amp. Plug control comprising wall socket point	2	Nos.	300	25%	375	750.00
	(vi)	Wiring 16/20Amp. power plug control point	6	Nos.	381	25%	476.25	2857.50
2	34.09	PVC INSULATED FR COPPER CONDUCTOR CABLES:						
		Supply and erection of PVC insulated FR single core Unsheathed copper conductor cable (ISI marked) suitable upto 1100 volts grade confirm to IS:694/1990 left bare in pipe or casing of suitable size complete in all respect as desired by the Engineer-in-charge:-						
	(i)	Overall size 1sq.mm (Un-sheathed)	250	Mtr.	14	30%	18.2	4550.00
	(ii)	Overall size 1.5sq.mm (Un-sheathed)	210	Mtr.	18	30%	23.4	4914.00
	(iii)	Overall size 2.5sq.mm (Un-sheathed)	50	Mtr.	27	30%	35.1	1755.00
	(iv)	Overall size 4sq.mm (Un-sheathed)	100	Mtr.	39	30%	50.7	5070.00
	(v)	Overall size 6sq.mm (Un-sheathed)	100	Mtr.	54	30%	70.2	7020.00
3	34.10 c	XLPE INSULATED UN-ARMoured CABLES (ON SURFACE):						
		Supply, laying and erection of aluminium conductor XLPE insulated PVC sheathed Un-armoured and served cable 1100 volts grade as per IS 7098 (Part-1)1988 to be laid loose in the existing trench or pipe as per PWD General Specifications:-						
	(xxii)	Overall size 25sq.mm (3½ Core) Un armoured (On-Surface)	110	Mtr.	140	25%	175	19250.00
4	34.12	PVC, HDPE PIPES & PVC FLEXIBLE PIPES:						
	(ii)	Heavy Gauge PVC Conduit Pipe 25mm dia. (On Surface)	50	Mtr.	39	40%	54.6	2730.00
	(x)	Heavy Gauge PVC Conduit Pipe 25mm dia. (Flushed)	10	Mtr.	48	40%	67.2	672.00
	(xi)	Heavy Gauge PVC Conduit Pipe 32mm dia. (Flushed)	10	Mtr.	66	40%	92.4	924.00
5	34.13	G.I. EARTHING						
	(xiii)	Earthing with G.I. wire/ rope in G.I. pipe partly recessed and partly on surface complete with 150cm long 50mm dia. G.I. earth pipe (Cutting threads and 36 Nos. holes, 1cm dia. to make a mesh around the GI Pipe) with G.I. reducing socket including erection of the same, 4.50 metre (14.76 feet) below ground level with 20Kg. charcoal & salt mixture etc., up to 8 metre in length (including boring & refilling).						
	(a)	Earthing with 8 S.W.G. (4mm dia.) G.I. wire in 15mm dia G.I. pipe with G.I. reducing socket 50mm x 15mm (upto 8Metre in length)	2	Nos.	2518	40%	3525.2	7050.40
6	(xvi)	Fixing additional length of earthing with G.I. wire/ rope in G.I. pipe (On Surface) with sockets, elbows and MS saddleclamps including painting etc						
	(a)	Additional length G.I. wire 8 S.W.G. (4mm dia.) in 15mm dia. G.I. pipe (On Surface)	10	Mtr.	125	40%	175	1750.00
7	34.16 A	MINIATURE CIRCUIT BREAKERS:						
	(ii)	MCB Single Pole 6-32amp. (10kA, Curve-C)	7	Nos.	134	35%	180.9	1266.30
	(iii)	MCB Single Pole 40amp. (10kA, Curve-C)	5	Nos.	278	35%	375.3	1876.50
	(xvi)	MCB Four Pole 50, 63amp. (10kA, Curve-C)	1	Nos.	1231	35%	1661.85	1661.85
8	34.17	SHEET METAL DOUBLE DOOR DISTRIBUTION BOARD FOR MCB's/ RCBO's/ RCCB's:						
	(v)	TP&N Horizontal Double Door Distribution Board 4 way each	1	Nos.	2406	15%	2766.9	2766.90
9	34.18	SHEET METAL IRON CLAD SWITCHES:						
	(vii)	ICTPN Switch 100amp., 415volts	1	Nos.	4927	15%	5666.05	5666.05
10	34.38	SHEET METAL CUBICAL PEDESTAL, TOWER STRUCTURES, HT & LT LINE ITEMS, MS CHANNELS, BRASS GLANDS, ALUMINIUM & COPPER THIMBLES::						

	(i)	CUBICAL PEDESTAL:						
	(a)	Cubical Size 900mm high, 600mm wide and 350mm deep with platform dimensions 700mm x 450mm x 450mm	1	Nos.	8571	40%	11999.4	11999.40
11	34.37 A	DOUBLE WALLED CORRUGATED (DWC) HDPE PIPES:						
	(ii)	Double Walled Corrugated HDPE Pipe 63/ 51mm (Outer/ Inner dia.)	10	Nos.	148	0%	148	1480.00
12	34.34	OVER HEAD DISTRIBUTION ALUMINIUM CABLES, ACSR CONDUCTORS, CLAMPS, JUMPERS & JOINT KITS:						
	(d)	PVC insulated & PVC sheathed aluminium conductor cable Overall Size 16mm ² (1/1.40mm) Twin Core	30	Mtr.	68	40%	95.2	2856.00
		Total CSR Items						94267.15
		A & C slip no. 5C CSR 2020 GST Difference @5.35 % on all CSR items						5043.29
		Total						99310.44
13	NS	S/E of Ceiling fan 1400mm Sweep, with power input 60watt, Speed 290 RPM & air delivery 245 cu mtr/min, ISI approved complete in all respect of make crompton , USHA, Havells.	2	Nos.	1953			3906.00
14	NS	S/E of LED Tube light highly durable surface mounted with T-8 LED, 18/20 watt Tubular Lamp and decorative end caps complete (Fitting & Tube lamp) in all respect as desired by Engineer-in-charge (Make: Crompton/Philips/ Wipro)	4	Nos.	730			2920.00
15	NS	S/E of Energy Saving LED Flood Light with optical lens for superior light distribution 90/100 Watt Aluminum PDC housing, with powder coated, IP 65 Protection, Covering heat resistant toughened glass, Efficacy>100Lm/w complete set along with all required accessories with 5 years warranty complete as desired by engineer -in-charge (Make: Crompton/Philips/Wipro/Polycab	1	Nos.	8273			8273
							Total NS	15099.00
							Total (CSR + NS)	114409.44
							Unforeseen items @ 3 %	3432.28
							Contingency @ 5 %	5720.47
							Total	123562.20
		Say Total:-123600/-						
4	Rates /Quantities taken in the estimate are provisional and for estimation purpose only. The payment to the contractor/agency should only be made as per tendered rates/actual work done at site and PWD specifications.							

Executive Engineer (Electrical)

SDE(Electrical)

JE (Electrical)

18/10/2024