

BILL OF QUANTITIES FOR 1, 5, 10MLD PHYTORID, MBBR, ASP, SBR TECHNOLOGY

Work Name- 1 MLD Phytorid Technology BOQ.

Sr. No.	Mah. PWD SSR Item No.	Description	Qty.	Units	Rate As per PWD 18-19 (Excluding GST)	Amount
1	21.33	Clearing jungle including uprooting of rank vegetation, grass, brush wood, trees and saplings of girth upto 30 cm measured at a height of 1 m above ground level and removal of rubbish upto a distance of 50 m outside the periphery of the area cleared.	972.25	Sq.m	8.00	7,778.00
2	21..02	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means over areas (exceeding 30cm. in depth, 1.5m in width as well as 10sqm. on plan) including disposal of excavated earth, lead up to 50m and lift up to 1.5m disposed earth to be leveled and neatly dressed : All kind of soil.	930.00	Cum	143.00	132,990.00
3	21.36	Filling available excavated earth (excluding rocks) in trenches, plinth, sides of foundation etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering lead up to 50m and lift up to 1.5m.	673.58	cum	85.00	57,254.30
4	21.38	Dry stone pitching 22.5 cm thick including supply of stones and preparing surface complete.	653.70	Cum	945.00	617,749.34
5	24.01	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering : All works up to plinth level : M10	139.00	cum	4,257.00	591,723.00
6	5.33.1 & 5.34.1 CPWD-16	Providing and laying in position ready mixed M-30 grade concrete for reinforced cement concrete work, using cement content as per approved design mix, manufactured in fully automatic batching plant and transported to site of work in transit mixer for all leads having continuous agitated mixer, manufactured as per mix design of specified grade for reinforced cement concrete work including pumping of R.M.C. from transit mixer to site of laying , excluding the cost of centering, shuttering finishing and reinforcement including cost of admixtures in recommended proportions as per IS : 9103 to accelerate/ retard setting of concrete, improve workability without impairing strength and durability as per direction of the Engineer - in - charge. (Note :- Cement content considered in this item is @ 330 kg/cum. Excess/less cement used as per design mix is payable/recoverable separately). All works upto plinth level.	2,021.00	cum	7,319.55	14,792,810.55

7	32.08	20 mm cement plaster with mix:1:3 (1cement:3 fine sand)	2,986.00	sqm	392.00	1,170,512.00
8	32.21	Neat cement punning	1,118.00	sqm	69.00	77,142.00
9	5.9.2 CPWD-16	Centering and shuttering including strutting, propping etc. and removal of form for : Walls (any thickness) including attached pilasters, buttresses, plinth and string courses etc.	5,275.00	sqm	378.60	1,997,115.00
10	5.9.3 CPWD-16	Centering and shuttering including strutting, propping etc. and removal of form for: Suspended floors, roofs, landings, balconies and access platform.	60.00	sqm	422.30	25,338.00
11	5.9.1 CPWD-16	Centering and shuttering including strutting, propping etc. and removal of form for: Foundation, Raft, PCC	111.00	Sq.m	193.95	21,528.45
12	26.33	Reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding complete: Thermo-Mechanically Treated bars.	222,370.49	kilogram	63.99	14,230,377.38
13	19.19.1.1 CPWD-16	Providing and fixing in position precast R.C.C. manhole cover and frame of required shape and approved quality : of size 600*450 mm	15.00	each	1,073.05	16,095.75
14	23.04	Steel work welded in built up sections/ framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer using structural steel etc. as required. In gratings, frames, guard bar, ladder, railings, brackets, gates and similar works	1,000.00	Kg	83.52	83,516.00
NON DSR ITEMS						
15		Conditioning of Filling Media as required at site for Phytoid technology treatment as approved by NEERI				
		Media Stone	2,430.00	Cum	1,650.00	4,009,500.00
Specialized Non DSR Items						
16		Passive filter media for last cell of phytoid bed				
		Activated Carbon	73.13	Cum	87.00	6,361.88
		Sand	73.13	Cum	165.00	12,065.63
17		Supply and planting of green plant such as Colocasiaesculenta, Canna Indica, Cyperusalternifoliusetc, etc for aerobic treatment in Phytoid bed filled with gravels, the quantity of plants and their spacing to be done as per direction of Scientist In-charge, NEERI.	900.00	sq.m	1,150.00	1,035,000.00

18		Providing and mixing Bio-Culture in sewage treatment plants for growth of the harmful / pathogenic bacteria and lead to faster commissioning of STP, the quality of bio-culture should stabilize the plant in 30-45 days, convert the organic waste into organic fertilizer, and enhance the overall efficiency of plant. The dosage quantity of bio-culture done as per direction of Scientist In-charge ,NEERI.	100.00	Lit	6,750.00	675,000.00
Note:- Above rate are excluding of GST					Total	39,559,857.27
MEP items						
19	Market Rate	Design, supply, installation, commissioning & testing with satisfactory test & trial of 3 phase fully Submersible Non Clog sewage lifting pumps for sewage transfer from collection sump to tube settler tank with pedestal base frame grouted in foundations. (2 Nos at collection tank , 1 No. extra in standby) Capacity- 41.5 cum/hr Duty head - 15 Mtr Moc-CI B.H.P - 5 Anchor fastener for mounting rain cap pressure gauge-feeding / AKAI (ISI or DJB approved)	3.00	Nos	227,449.40	682,348.21
20	Market Rate	Supply, installation, testing and commissioning of vertical self-supporting Multi grade Sand Filter. Filter shall be constructed of MSEP material as per manufacturer standard. The inner distribution system and the under bed draw off system shall be of Hub & Lateral type with top & bottom strainers. Filter shall be supplied with initial charge of Filter media like special graded sand with supporting media like silex, gravel etc. The filter shall complete with pressure gauge at inlet & outlet, sample cock, ms piping/interconnected ms piping and all necessary accessories. Capacity – 55.0m3/hr Pressure – 3.5Kg/cm2 Dimension – 2500mm Ø & 2500mm ht. Sampling port – 12mm Media – 100mm, 50mm, 25mm & 10mm	1.00	Nos	602,071.95	602,071.95

21	Market Rate	Supply, installation, testing and commissioning of vertical self supporting Activated Carbon Filter. Filter shall be constructed of MS Epoxy lining material as per manufacturer standard. The inner distribution system and the under bed draw off system shall be of Hub & Lateral type with top & bottom strainers. Filter shall be supplied with initial charge of media like Activated Carbon Media of 900 iodine value, with supporting media like silex, gravel etc. The filter shall complete with pressure gauge at inlet & outlet, sample cock, ms piping/interconnected ms piping and all necessary accessories. Capacity – 55.0m ³ /hr Pressure – 3.5Kg/cm ² Dimension – 2500mm Ø & 2500mm ht. Sampling port – 12mm Media – 100mm, 50mm, 25mm & 10mm	1.00	Nos	695,727.58	695,727.58
22	Market Rate	Providing, fixing, testing and commissioning of Horizontal self priming/ mono-block filter feed pumps for filtration. The pumps shall be made of CI casing, CI Impellar, SS shaft & sleeve, Mechanical Seal are connected to a TEFC induction motor mounted on a common channel base frame with coupling guard, , including all necessary piping, suction and delivery header, individual suction & delivery of pump valves, NRV, pressure gauge and other accessories and concrete foundation complete as required. Capacity- 55 cum/hr Type - self priming/ monoblock Duty head - 36 Mtr Moc-CI B.H.P - 5 Anchor fastener for mounting rain cap pressure gauge-feeding / AKAI (ISI or DJB approved)	3.00	Nos	147,173.14	441,519.43
23	Market Rate	Providing, fixing, testing & commissioning of Tube Settler Media with Base support of specification Square Tube , black colour, Thickness 1 mm , Vertical Ht. 1000 mm, UV Stabilized, Moc- PVC, Make- Marvellous Plastic/ MM Aqua	41.70	Cum	33,448.44	1,394,800.01
24	Market Rate	Providing, fixing, testing & commissioning of Filter press feed pumps Make:- Kirloskar, Capacity-5-10m ³ /hr@15mtr head, Type- Mono block Mud Pump , Hp-1	2.00	Nos	46,827.82	93,655.64

25	Market Rate	Providing, fixing, testing & commissioning of FILTER PRESS 1200MM X 1200MM X 60 CHAMBERS PP RECESS PLATE TYPE WITH LOCK NUT TYPE HYDRAULIC CLOSING DEVICE WITH ONE SET FILTER CLOTH	1.00	Nos	600,000.00	600,000.00
26	Market Rate	Providing, fixing, testing & commissioning of Poly dosing system for Filter press Dosing Tank-500 Ltr, MoC- HDPE, Make- Sintex, Qty-1 Nos., Dosing Pump-0-30 lph, Make- Milton Roy, MoC-PP, Qty- 2 Nos	1.00	Nos	295,000.00	295,000.00
27	Market Rate	Providing and setting up Hypo-Chloride Dozing System(HDPE make) of tank capacity 500ltr with dozing pump of capacity 0-10 lph in two numbers with agitator for mixing of any make ISI approved.	1.00	Nos	93,655.64	93,655.64
28	Market Rate	Starter Panel For detailed specifications please refer Annexure (Detailed specification of Starter Panel) 8 Nos of DOL starters	8.00	Nos	26,758.75	214,070.03
29	Market Rate	Supply and installation of Cabling in conduit includes POLYCAB / INDOCAB cables & 4 core for Sump Pump 4mm ² Al Armoured)	50.00	Mtr	401.38	20,069.06
30	Market Rate	Supplying and laying 25 mm X 5 mm GI strip at 0.50 meter below ground as strip earth electrode, including connection/ terminating with nut, bolt, spring, washer etc. as required. (Jointing shall be done by overlapping and with 2 sets of brass nut bolt & spring washer spaced at 50mm)	50.00	Mtr	2,087.18	104,359.14
31	Market Rate	Providing & fixing on line Electromagnetic type flow meter cum Totaliser for Monitoring the total flow, Flow rate. etc. Including electrical wiring from panel to flow meter. Complete with all type of Plumbing & Electrical connections, accessories, wiring, conduits & supports complete with all respect. The signal from read out shall be 4-20 m.amps to be received on BAS. (Inlet To STP & Treated water Line of size 250mm)	2.00	Nos	200,690.65	401,381.30
32	18.27.5	Providing and fixing all unit interconnection piping of following sizes /as per drawing Size - 250	50.00	Rmt	4,002.00	200,100.00
33	18.27.1	Providing and fixing all piping required for pumps of following sizes /as per drawing Size - 100	25.00	Rmt	1,201.95	30,048.75
34	Market Rate	Providing and fixing flow control valves of required size for pipe fittings Size - 250 MoC - UPVC	10.00	Nos	25,000.00	250,000.00

35	Market Rate	Providing and fixing butterfly valves of required size for pump fittings Size - 100, MoC -Upvc	6.00	Nos	15,000.00	90,000.00
36	Market Rate	Non return valves for pumps Size - 100mm, MoC – Upvc	4.00	Nos	20,000.00	80,000.00
37	18.17.6	Providing and fixing C.I. gate valves complete with bolts, nuts, rubber insertions etc. (the tail pieces if required will be paid separately) :of 80 mm size	2.00	Nos	2,217.90	4,435.80
38	Market Rate	MS-Portable cabins of size 10'x10'x8'6"	1.00	Nos	147,173.14	147,173.14
		Total MEP				6,440,415.66
		O&M cost for 5 years				
39	O&M sheet	Operation and Maintenance of for 1 year. Payment shall be released quarterly. Duties during O&M: plant to be run 24/7. Adequate security and operators to be provided for proper plant operation. Treated water quality target should be monitored by NEERI (random sampling). Equipments maintenance and repair, replacement and maintenance of plants shall be the responsibility of contractor. Electricity charges shall be paid as per actual usage on producing the bills.	5.00	Years	12,088,665.48	12,088,665.48
		Total of MEP and O&M				12,088,665.48
		Grand total Civil, MEP, O&M				58,088,938.40
40		Providing detailed hydraulic, P&ID & line drawings & RCC drawings and its approval from competitive agency	1.00	Job	500,000.00	500,000.00
		Grand total Civil, MEP, O&M				58,588,938.40
41		3rd Party supervision as PMC				1,171,778.77
		Total cost of project				59,760,717.17
<p>NOTE: The item rates and cost are used only for reference and are subjected to vary based on market situations and timely updates in DSR.</p>						

Work Name- 5 MLD Phytorid Technology BOQ.

Sr. No.	Maharashtra PWD SSR Item No.	Description	Qty.	Units	Rate As per PWD 18-19 (Excluding GST)	Amount
1	21.33	Clearing jungle including uprooting of rank vegetation, grass, brush wood, trees and saplings of girth upto 30 cm measured at a height of 1 m above ground level and removal of rubbish upto a distance of 50 m outside the periphery of the area cleared.	5,250.00	Sq.m	8.00	42,000.00
2	21..02	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means over areas (exceeding 30cm. in depth, 1.5m in width as well as 10sqm. on plan) including disposal of excavated earth, lead up to 50m and lift up to 1.5m disposed earth to be leveled and neatly dressed : All kind of soil.	917.00	Cum	143.00	131,131.00
3	21.36	Filling available excavated earth (excluding rocks) in trenches, plinth, sides of foundation etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering lead up to 50m and lift up to 1.5m.	1,385.43	cum	85.00	117,761.55
4	21.38	Dry stone pitching 22.5 cm thick including supply of stones and preparing surface complete.	1,844.09	Cum	945.00	1,742,663.16
5	24.01	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering : All works up to plinth level : M10	669.00	cum	4,257.00	2,847,933.00
6	5.33.1 & 5.34.1 CPWD-16	Providing and laying in position ready mixed M-30 grade concrete for reinforced cement concrete work, using cement content as per approved design mix, manufactured in fully automatic batching plant and transported to site of work in transit mixer for all leads having continuous agitated mixer, manufactured as per mix design of specified grade for reinforced cement concrete work including pumping of R.M.C. from transit mixer to site of laying , excluding the cost of centering, shuttering finishing and reinforcement including cost of admixtures in recommended proportions as per IS : 9103 to accelerate/ retard setting of concrete, improve workability without impairing strength and durability as per direction of the Engineer - in - charge. (Note :- Cement content considered in this item is @ 330 kg/cum. Excess/less cement used as per design mix is payable/recoverable separately). All works upto plinth level.	4,958.00	cum	7,319.55	36,290,328.90
7	32.08	20 mm cement plaster with mix:1:3 (1cement:3 fine sand)	7,973.00	sqm	392.00	3,125,416.00
8	32.21	Neat cement punning	3,077.00	sqm	69.00	212,313.00

9	5.9.2 CPWD-16	Centering and shuttering including strutting, propping etc. and removal of form for : Walls (any thickness) including attached pilasters, buttresses, plinth and string courses etc.	11,150.00	sqm	378.60	4,221,390.00
10	5.9.3 CPWD-16	Centering and shuttering including strutting, propping etc. and removal of form for: Suspended floors, roofs, landings, balconies and access platform.	514.00	sqm	422.30	217,062.20
11	5.9.1 CPWD-16	Centering and shuttering including strutting, propping etc. and removal of form for: Foundation, Raft, PCC	643.00	Sq.m	193.95	124,709.85
12	26.33	Reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding complete: Thermo-Mechanically Treated bars.	545,440.00	kilogram	63.99	34,904,887.36
13	19.19.1.1 CPWD-16	Providing and fixing in position precast R.C.C. manhole cover and frame of required shape and approved quality : of size 600*450 mm	33.00	each	1,073.05	35,410.65
14	23.04	Steel work welded in built up sections/ framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer using structural steel etc. as required. In gratings, frames, guard bar, ladder, railings, brackets, gates and similar works	6,600.00	Kg	83.52	551,205.60
NON DSR ITEMS						
15		Conditioning of Filling Media as required at site for Phytorid technology treatment as approved by NEERI				
		Media Stone	11,550.00	Cum	1,650.00	19,057,500.00
Specialized Non DSR Items						
16		Passive filter media for last cell of phytorid bed				
		Activated Carbon	393.75	Cum	87.00	34,256.25
		Sand	393.75	Cum	165.00	64,968.75
17		Supply and planting of green plant such as Colocasiaesculenta, Canna Indica,Cyperusalternifoliusetc, etc for aerobic treatment in Phytorid bed filled with gravels, the quantity of plants and their spacing to be done as per direction of Scientist In-charge,NEERI.	5,250.00	sq.m	1,150.00	6,037,500.00
18		Providing and mixing Bio-Culture in sewage treatment plants for growth of the harmful / pathogenic bacteria and lead to faster commissioning of STP, the quality of bio-culture should stabilize the plant in 30-45 days ,convert the organic waste into organic fertilizer, enhance the overall efficiency of plant. The dosage quantity of bio-culture done as per direction of Scientist In-charge ,NEERI.	500.00	Lit	6,750.00	3,375,000.00
Note:- Above rate are excluding of GST					Total	113,133,437.27

MEP items						
20	Market Rate	Design, supply, installation, commissioning & testing with satisfactory test & trial of 3 phase fully Submersible Non Clog sewage lifting pumps for sewage transfer from sump well to sedimentation tank with pedestal base frame grouted in foundations. (2 Nos at collection tank , 1 No. extra in standby) Capacity- 208 cum/hr Duty head - 15 Mtr, Moc-CI, B.H.P - 15 Anchor fastener for mounting rain cap pressure gauge-feeding / AKAI (ISI or DJB approved)	3.00	Nos	450,000.00	1,350,000.00
	Market Rate	Providing, fixing, testing & commissioning of Tube Settler Media with Base support of specification Square Tube , black colour, Thickness 1 mm , Vertical Ht. 1000 mm, UV Stabilized, Moc- PVC, Make- Marvellous Plastic/ MM Aqua	208.00	Cum	33,448.44	6,957,275.82
	Market Rate	Providing, fixing, testing & commissioning of Decanter feed pumps Make:- Kirloskar, Capacity-10-20m3/hr@15mtr head, Type- Mono block Mud Pump , Hp-2	2.00	Nos	46,827.82	93,655.64
	Market Rate	Supply & installation of Decanter for sludge thickening (As per attached specification sheet)	1.00	Nos	1,950,000.00	1,950,000.00
	Market Rate	Providing, fixing, testing & commissioning of Poly dosing system for Decanter Dosing Tank-1000 Ltr, MoC- HDPE, Make- Sintex, Qty-1 Nos., Dosing Pump-0-50 lph, Make- Milton Roy, MoC-PP,Qty- 2 Nos	1.00	Nos	375,000.00	375,000.00
	Market Rate	Providing and setting up Ozonator of capacity 875gm/hr of O2.	1.00	Nos	2,000,000.00	2,000,000.00
24	Market Rate	Starter Panel For detailed specifications please refer Annexure (Detailed specification of Starter Panel) 8 Nos of DOL starters	8.00	Nos	26,758.75	214,070.03
25	Market Rate	Supply and installation of Cabling in conduit includes POLYCAB / INDOCAB cables & 4 core for Sump Pump 4mm2 Al Armoured)	150.00	Mtr	401.38	60,207.19
26	Market Rate	Supplying and laying 25 mm X 5 mm GI strip at 0.50 meter below ground as strip earth electrode, including connection/ terminating with nut, bolt, spring, washer etc. as required. (Jointing shall be done by overlapping and with 2 sets of brass nut bolt & spring washer spaced at 50mm)	150.00	Mtr	2,087.18	313,077.41
27	Market Rate	Providing & fixing on line Flange type Ultrasonic Flow meter for Monitoring the total flow, Flow rate. etc. Including electrical wiring from panel to flow meter. Complete with all type of Plumbing & Electrical connections, accessories, wiring, conduits & supports complete with all respect.(Inlet To STP & Treated water Line) - Size - 500mm dia	2.00	Nos	735,000.00	1,470,000.00

28	18.27.9	Providing and fixing all unit interconnection piping of following sizes /as per drawing, Size - 500	150.00	Rmt	11,969.15	1,795,372.50
29	18.27.5	Providing and fixing all piping required for pumps of following sizes /as per drawing, Size - 250	50.00	Rmt	4,002.00	200,100.00
30	Market Rate	Providing and fixing flow control valves of required size for pipe fittings Size – 500, MoC - UPVC	10.00	Nos	45,524.00	455,240.00
31	Market Rate	Providing and fixing butterfly valves of required size for pump fittings Size - 250, MoC -Upvc	6.00	Nos	27,530.00	165,180.00
32	Market Rate	Non return valves for pumps Size - 250mm, MoC - Upvc	4.00	Nos	39,485.00	157,940.00
33	18.17.6	Providing and fixing C.I. gate valves complete with bolts, nuts, rubber insertions etc. (the tail pieces if required will be paid separately) :of 80 mm size	2.00	Nos	2,217.90	4,435.80
34	Market Rate	MS-Portable cabins of size 10'x10'x8'6"	1.00	Nos	147,173.14	147,173.14
Total MEP						17,708,727.53
O&M cost for 5 years						
35	O&M sheet	Operation and Maintenance of for 1 year. Payment shall be released quarterly. Duties during O&M: plant to be run 24/7. Adequate security and operators to be provided for proper plant operation. Treated water quality target should be monitored by NEERI (random sampling). Equipments maintenance and repair, replacement and maintenance of plants shall be the responsibility of contractor. Electricity charges shall be paid as per actual usage on producing the bills.	5.00	Years	9,946,515.14	9,946,515.14
Total of MEP and O&M						9,946,515.14
Grand total Civil, MEP, O&M						140,788,679.94
36		Providing detailed hydraulic, P&ID & line drawings & RCC drawings and its approval from competitive agency	1.00	Job	500,000.00	500,000.00
Grand total Civil, MEP, O&M						141,288,679.94
38		3rd Party supervision as PMC				2,825,773.60
Total cost of project						144,114,453.54
NOTE: The item rates and cost are used only for reference and are subjected to vary based on market situations and timely updates in DSR.						

Work Name- 10 MLD STP Phytorid Technology BOQ.

Sr. No.	Mah. PWD SSR Item No.	Description	Qty.	Units	Rate As per PWD 18-19 (Excluding GST)	Amount
1	21.33	Clearing jungle including uprooting of rank vegetation, grass, brush wood, trees and saplings of girth upto 30 cm measured at a height of 1 m above ground level and removal of rubbish upto a distance of 50 m outside the periphery of the area cleared.	10,500.00	Sq.m	8.00	84,000.00
2	21..02	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means over areas (exceeding 30cm. in depth, 1.5m in width as well as 10sqm. on plan) including disposal of excavated earth, lead up to 50m and lift up to 1.5m disposed earth to be leveled and neatly dressed : All kind of soil.	1,834.00	Cum	143.00	262,262.00
3	21.36	Filling available excavated earth (excluding rocks) in trenches, plinth, sides of foundation etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering lead up to 50m and lift up to 1.5m.	1,977.73	cum	85.00	168,107.05
4	21.38	Dry stone pitching 22.5 cm thick including supply of stones and preparing surface complete.	3,461.35	Cum	945.00	3,270,979.06
5	24.01	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering : All works up to plinth level : M10	1,338.00	cum	4,257.00	5,695,866.00
6	5.33.1 & 5.34.1 CPWD-16	Providing and laying in position ready mixed M-30 grade concrete for reinforced cement concrete work, using cement content as per approved design mix, manufactured in fully automatic batching plant and transported to site of work in transit mixer for all leads having continuous agitated mixer, manufactured as per mix design of specified grade for reinforced cement concrete work including pumping of R.M.C. from transit mixer to site of laying , excluding the cost of centering, shuttering finishing and reinforcement including cost of admixtures in recommended proportions as per IS : 9103 to accelerate/ retard setting of concrete, improve workability without impairing strength and durability as per direction of the Engineer - in - charge. (Note :- Cement content considered in this item is @ 330 kg/cum. Excess/less cement used as per design mix is payable/recoverable separately). All works upto plinth level.	9,916.00	cum	7,319.55	72,580,657.80
7	32.08	20 mm cement plaster with mix:1:3 (1cement:3 fine sand)	15,946.00	sqm	392.00	6,250,832.00

8	32.21	Neat cement punning	6,154.00	sqm	69.00	424,626.00
9	5.9.2 CPWD-16	Centering and shuttering including strutting, propping etc. and removal of form for : Walls (any thickness) including attached pilasters, buttresses, plinth and string courses etc.	22,300.00	sqm	378.60	8,442,780.00
10	5.9.3 CPWD-16	Centering and shuttering including strutting, propping etc. and removal of form for: Suspended floors, roofs, landings, balconies and access platform.	1,028.00	sqm	422.30	434,124.40
11	5.9.1 CPWD-16	Centering and shuttering including strutting, propping etc. and removal of form for: Foundation, Raft, PCC	1,286.00	Sq.m	193.95	249,419.70
12	26.33	Reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding complete: Thermo-Mechanically Treated bars.	1,090,880.00	kilogram	63.99	69,809,774.72
13	19.19.1.1 CPWD-16	Providing and fixing in position precast R.C.C. manhole cover and frame of required shape and approved quality : of size 600*450 mm	55.00	each	1,073.05	59,017.75
14	23.04	Steel work welded in built up sections/ framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer using structural steel etc. as required. In gratings, frames, guard bar, ladder, railings, brackets, gates and similar works	13,200.00	Kg	83.52	1,102,411.20
NON DSR ITEMS						
15		Conditioning of Filling Media as required at site for Phytoid technology treatment as approved by NEERI				
		Media Stone	23,100.00	Cum	1,650.00	38,115,000.00
Specialized Non DSR Items						
16		Passive filter media for last cell of phytoid bed				
		Activated Carbon	787.50	Cum	87.00	68,512.50
		Sand	787.50	Cum	165.00	129,937.50
17		Supply and planting of green plant such as Colocasiaesculenta, Canna Indica, Cyperus alternifolius etc, etc for aerobic treatment in Phytoid bed filled with gravels, the quantity of plants and their spacing to be done as per direction of Scientist In-charge, NEERI.	8,928.57	sq.m	1,150.00	10,267,857.14

18		Providing and mixing Bio-Culture in sewage treatment plants for growth of the harmful / pathogenic bacteria and lead to faster commissioning of STP, the quality of bio-culture should stabilize the plant in 30-45 days ,convert the organic waste into organic fertilizer, enhance the overall efficiency of plant. The dosage quantity of bio-culture done as per direction of Scientist In-charge ,NEERI.	1,000.00	Lit	6,750.00	6,750,000.00
Note:- Above rate are excluding of GST					Total	224,166,164.82
MEP items						
19	Market Rate	Design, supply, installation, commissioning & testing with satisfactory test & trial of 3 phase fully Submersible Non Clog sewage lifting pumps for sewage transfer from sump well to sedimentation tank with pedestal base frame grouted in foundations. (2 Nos at Sumpwell , 1 No. extra in standby) Capacity- 416 cum/hr Duty head - 15 Mtr Moc-CI B.H.P - 25 Anchor fastener for mounting rain cap pressure gauge-feeding / AKAI (ISI or DJB approved)	3.00	Nos	725,345.00	2,176,035.00

20	Market Rate	<p>Primary Clarifier Mechanism with Suitable for mounting on RCC Tank of size 19 mt. Dia.x 2.5 mt.SWD+0.3MT.FB Access Bridge :- M.S. Fabricated with full walkway with 1000 mm width & length is 19 mtr. Chequered plate walkway of 5 mm thick and hand railings made of 32 / 25 NB 'B' class pipes of 1.00 meter high from one end of the bridge to the drive center and a meter beyond Drive:- Central driven by worm & worm wheel through chain & Sprocket connected to motor, RPM of central Scrapper is 4-5 RPH,Couple with gear box. Motor:- 5Hp , 4 pole,3 ph,440 volts AC, Make- Crompton/ Equivalent, Type- Foot Mounted Gear Box:- Radicon/Equiv, Input PRM-1440. Central Shaft:- M.S. epoxy painted central shaft of heavy pipe construction ,coupled with drive housing. Scrappers:-M.S. Epoxy painted scrapper arms of structural frame work with blades to sweep the tank bottom twice per revolution. MoC- MSEP, Material 50x50x5 mm Angle Frame, with ISMC Support .Scrapper provided with neoprene rubber squeezes to collect the sludge at the centre point.Clarifier rake arms, two nos., made of channels and suitably braced with MS angles, duly welded with blades, made of 5 mm plates, 760 mm long , will be positioned on either side of the vertical shaft. Scum Scrapping Mechanism:- MoC- MSEP. , Size:- 0.3mx 9.25 m,Material :- MS Palte 6 mm thickness with 50x50x5 mm angle Feed Well:- M.S. Fabricated , Supported from the bridge Dia:-3M. & Height 2 mtr, Material :- MS Plate 6 mm Thickness , with 50x50x5mm thickness Angle. Painting:- All wetted parts will be painted with 2 coats of enamel paint. Weir plates along with fixing bolts :- Size :-21.5M Dia , & 0.4m Height, MoC- MSEP, Plate thickness 6 mm</p>	1.00	Nos	2,350,000.00	2,350,000.00
21	Market Rate	<p>Providing, fixing, testing & commissioning of Decanter feed pumps Make:- Kirloskar, Capacity-30m3/hr@15mtr head, Type- Mono block Mud Pump , Hp-2</p>	2.00	Nos	67,350.00	134,700.00
22	Market Rate	<p>Supply & installation of Decanter for sludge thickening (As per attached Specification sheet)</p>	1.00	Nos	2,300,000.00	2,300,000.00

23	Market Rate	Providing, fixing, testing & commissioning of Poly dosing system for Decanter Dosing Tank-2000 Ltr, MoC- HDPE, Make- Sintex, Qty-1 Nos., Dosing Pump-0-100 lph, Make- Milton Roy, MoC- PP, Qty- 2 Nos	1.00	Nos	450,000.00	450,000.00
24	Market Rate	Providing and setting up Ozonator of capacity 2375gm/hr of O2.	1.00	Nos	4,600,000.00	4,600,000.00
25	Market Rate	Starter Panel For detailed specifications please refer Annexure (Detailed specification of Starter Panel) 8 Nos of DOL starters	8.00	Nos	26,758.75	214,070.03
26	Market Rate	Supply and installation of Cabling in conduit includes POLYCAB / INDOCAB cables & 4 core for Sump Pump 4mm ² Al Armoured)	200.00	Mtr	401.38	80,276.26
27	Market Rate	Supplying and laying 25 mm X 5 mm GI strip at 0.50 meter below ground as strip earth electrode, including connection/ terminating with nut, bolt, spring, washer etc. as required. (Jointing shall be done by overlapping and with 2 sets of brass nut bolt & spring washer spaced at 50mm)	200.00	Mtr	2,087.18	417,436.55
28	Market Rate	Providing & fixing on line Flange type Ultrasonic Flow meter for Monitoring the total flow, Flow rate. etc. Including electrical wiring from panel to flow meter. Complete with all type of Plumbing & Electrical connections, accessories, wiring, conduits & supports complete with all respect. (Inlet To STP & Treated water Line) - Size - 600mm dia	2.00	Nos	1,135,000.00	2,270,000.00
29	18.27.11	Providing and fixing all unit interconnection piping of following sizes /as per drawing Size - 600	150.00	Rmt	16,722.75	2,508,412.50
30	18.27.7	Providing and fixing all piping required for pumps of following sizes /as per drawing Size - 350	50.00	Rmt	6,472.60	323,630.00
31	Market Rate	Providing and fixing flow control valves of required size for pipe fittings Size - 600 MoC - UPVC	10.00	Nos	75,625.00	756,250.00
32	Market Rate	Providing and fixing butterfly valves of required size for pump fittings Size - 350, MoC -Upvc	6.00	Nos	45,600.00	273,600.00
33	Market Rate	Non return valves for pumps Size - 350mm, MoC - Upvc	4.00	Nos	68,350.00	273,400.00
34	18.17.6	Providing and fixing C.I. gate valves complete with bolts, nuts, rubber insertions etc. (the tail pieces if required will be paid separately) :of 80 mm size	2.00	Nos	2,217.90	4,435.80

35	Market Rate	MS-Portable cabins of size 10'x10'x8'6"	1.00	Nos	147,173.14	147,173.14
		Total MEP				19,279,419.28
		O&M cost for 5 years				
36	O&M sheet	Operation and Maintenance of for 1 year. Payment shall be released quarterly. Duties during O&M: plant to be run 24/7. Adequate security and operators to be provided for proper plant operation. Treated water quality target should be monitored by NEERI (random sampling). Equipment's maintenance and repair, replacement and maintenance of plants shall be the responsibility of contractor. Electricity charges shall be paid as per actual usage on producing the bills.	5.00	Years	14,848,644.68	14,848,644.68
		Total of MEP and O&M				14,848,644.68
37		Providing detailed hydraulic, P&ID & line drawings & RCC drawings and its approval from competitive agency	1.00	Job	500,000.00	500,000.00
		Grand total Civil, MEP, O&M				258,794,228.78
38		3rd Party supervision as PMC				5,175,884.58
		Total cost of project(10MLD STP Phytoid Technology)				263,970,113.35
<p>NOTE: The item rates and cost are used only for reference and are subjected to vary based on market situations and timely updates in DSR.</p>						

Work Name- 1MLD MBBR BOQ For Civil & MEP						
Sr. No.	Maharashtr a PWD SSR Item No.	Description	Qty.	Units	Rate As per PWD 18-19 (Excluding GST)	Amount
1	21.33	Clearing jungle including uprooting of rank vegetation, grass, brush wood, trees and saplings of girth upto 30 cm measured at a height of 1 m above ground level and removal of rubbish upto a distance of 50 m outside the periphery of the area cleared.	2,902.50	Sq.m	8.00	23,220.00
2	21..02	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means over areas (exceeding 30cm. in depth, 1.5m in width as well as 10sqm. on plan) including disposal of excavated earth, lead up to 50m and lift up to 1.5m disposed earth to be leveled and neatly dressed : All kind of soil.	1,344.95	Cum	143.00	192,327.21
3	21.36	Filling available excavated earth (excluding rocks) in trenches, plinth, sides of foundation etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering lead up to 50m and lift up to 1.5m.	481.31	cum	85.00	40,911.56
4	21.38	Dry stone pitching 22.5 cm thick including supply of stones and preparing surface complete.	206.47	Cum	945.00	195,114.98
5	24.01	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering : All works up to plinth level : M10	121.15	cum	4,257.00	515,752.58

6	5.33.1 & 5.34.1 CPWD-16	Providing and laying in position ready mixed M-30 grade concrete for reinforced cement concrete work, using cement content as per approved design mix, manufactured in fully automatic batching plant and transported to site of work in transit mixer for all leads having continuous agitated mixer, manufactured as per mix design of specified grade for reinforced cement concrete work including pumping of R.M.C. from transit mixer to site of laying , excluding the cost of centering, shuttering finishing and reinforcement including cost of admixtures in recommended proportions as per IS : 9103 to accelerate/ retard setting of concrete, improve workability without impairing strength and durability as per direction of the Engineer - in - charge. (Note :- Cement content considered in this item is @ 330 kg/cum. Excess/less cement used as per design mix is payable/recoverable separately). All works upto plinth level.	521.80	cum	7,319.55	3,819,336.07
7	32.08	20 mm cement plaster with mix:1:3 (1cement:3 fine sand)	2,554.09	sqm	392.00	1,001,202.89
8	32.21	Neat cement punning	2,554.09	sqm	69.00	176,232.14
9	5.9.2 CPWD-16	Centering and shuttering including strutting, propping etc. and removal of form for : Walls (any thickness) including attached pilasters, buttresses, plinth and string courses etc.	1,578.00	sqm	378.60	597,432.31
10	5.9.3 CPWD-16	Centering and shuttering including strutting, propping etc. and removal of form for: Suspended floors, roofs, landings, balconies and access platform.	297.42	sqm	422.30	125,600.47
11	5.9.1 CPWD-16	Centering and shuttering including strutting, propping etc. and removal of form for: Foundation, Raft, PCC	146.68	Sq.m	193.95	28,448.97
12	5.9.5 CPWD-16	Centering and shuttering including strutting, propping etc. and removal of form for: Beams, Lintel Beams	265.50	Sq.m	342.90	91,039.95
13	5.9.6 CPWD-16	Centering and shuttering including strutting, propping etc. and removal of form for: Column	399.36	Sq.m	467.85	186,840.58

14	26.33	Reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding complete: Thermo-Mechanically Treated bars.	52,049.48	kilogram	63.99	3,330,854.43
15	19.19.1.1 CPWD-16	Providing and fixing in position precast R.C.C. manhole cover and frame of required shape and approved quality : of size 600*450 mm	16.00	each	1,073.05	17,168.80
16	23.04	Steel work welded in built up sections/ framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer using structural steel etc. as required. In gratings, frames, guard bar, ladder, railings, brackets, gates and similar works	400.00	Kg	83.52	33,406.40
Note:- Above rate are excluding of GST					Total	10,374,889.33
MEP items						
17	Market Rate	Design, supply, installation, commissioning & testing with satisfactory test & trial of 3 phase fully Submersible Non Clog sewage lifting pumps for sewage transfer from collection sump to tube settler tank with pedestal base frame grouted in foundations. (2 Nos at collection tank , 1 No. extra in standby) Capacity- 41.5 cum/hr Duty head - 15 Mtr Moc-CI B.H.P - 5 Anchor fastener for mounting rain cap pressure gauge-feeding / AKAI (ISI or DJB approved)	3.00	Nos	227,449.40	682,348.21

18	Market Rate	<p>Supply, installation, testing and commissioning of vertical self-supporting Multi grade Sand Filter. Filter shall be constructed of MSEP material as per manufacturer standard. The inner distribution system and the under bed draw off system shall be of Hub & Lateral type with top & bottom strainers. Filter shall be supplied with initial charge of Filter media like special graded sand with supporting media like silex, gravel etc. The filter shall complete with pressure gauge at inlet & outlet, sample cock, ms piping/interconnected ms piping and all necessary accessories.</p> <p>Capacity – 55.0m³/hr Pressure – 3.5Kg/cm² Dimension – 2500mm Ø & 2500mm ht. Sampling port – 12mm Media – 100mm, 50mm, 25mm & 10mm</p>	1.00	Nos	602,071.95	602,071.95
19	Market Rate	<p>Supply, installation, testing and commissioning of vertical self supporting Activated Carbon Filter. Filter shall be constructed of MS Epoxy lining material as per manufacturer standard. The inner distribution system and the under bed draw off system shall be of Hub & Lateral type with top & bottom strainers. Filter shall be supplied with initial charge of media like Activated Carbon Media of 900 iodine value, with supporting media like silex, gravel etc. The filter shall complete with pressure gauge at inlet & outlet, sample cock, ms piping/interconnected ms piping and all necessary accessories.</p> <p>Capacity – 55.0m³/hr Pressure – 3.5Kg/cm² Dimension – 2500mm Ø & 2500mm ht. Sampling port – 12mm Media – 100mm, 50mm, 25mm & 10mm</p>	1.00	Nos	695,727.58	695,727.58

20	Market Rate	<p>Providing, fixing, testing and commissioning of Horizontal self priming/ mono-block filter feed pumps for filtration. The pumps shall be made of CI casing, CI Impellar, SS shaft & sleeve, Mechanical Seal are connected to a TEFC induction motor mounted on a common channel base frame with coupling guard, , including all necessary piping, suction and delivery header, individual suction & delivery of pump valves, NRV, pressure gauge and other accessories and concrete foundation complete as required.</p> <p>Capacity- 55 cum/hr Type - self priming/ monoblock Duty head - 36 Mtr Moc-CI B.H.P - 5 Anchor fastener for mounting rain cap pressure gauge-feeding / AKAI (ISI or DJB approved)</p>	3.00	Nos	147,173.14	441,519.43
21	Market Rate	<p>Providing, fixing, testing & commissioning of blower for SBR tank and poly dosing system for sludge handling with pipe and valve arrangements. (1working + 1 standby)</p> <p>Blower Capacity – 160m3/hr@4500mmwc HP – 5 MoC - CI Make – Everest/Equi.</p>	2.00	Nos	301,035.97	602,071.95
22	Market Rate	<p>Providing, fixing, testing & commissioning of Air Diffusors of following specification Size-63mmODx1000mm length,MoC- Silicon, Make- Sadan-cogen/ Vibro Retrievable type</p>	49.00	Nos	9,900.74	485,136.19
23	Market Rate	<p>Providing, fixing, testing & commissioning of Tube Settler Media with Base support of specification Square Tube , black colour, Thickness 1 mm , Vertical Ht. 1000 mm, UV Stabilized, Moc-PVC, Make- Marvellous Plastic/ MM Aqua</p>	41.70	cu.m	33,448.44	1,394,800.01

24	Market Rate	Providing, fixing, testing & commissioning of MBBR & anoxic tank Media of following specification MoC-PP, Size-20mmx15mm, 1m ³ -100000/-pieces	121.50	cu.m	27,427.72	3,332,468.22
25	Market Rate	Providing, fixing, testing & commissioning of Filter press feed pumps Make:- Kirloskar, Capacity-5-10m ³ /hr@15mtr head, Type- Mono block Mud Pump , Hp-1	2.00	Nos	46,827.82	93,655.64
26	Market Rate	Providing, fixing, testing & commissioning of FILTER PRESS 1200MM X 1200MM X 60 CHAMBERS PP RECESS PLATE TYPE WITH LOCK NUT TYPE HYDRAULIC CLOSING DEVICE WITH ONE SET FILTER CLOTH	1.00	Nos	600,000.00	600,000.00
27	Market Rate	Providing, fixing, testing & commissioning of Poly dosing system for Filter press Dosing Tank-500 Ltr, MoC- HDPE, Make- Sintex, Qty-1 Nos., Dosing Pump-0-30 lph, Make- Milton Roy, MoC-PP,Qty- 2 Nos	1.00	Nos	295,000.00	295,000.00
28	Market Rate	Providing and setting up Hypo-Chloride Dozing System(HDPE make) of tank capacity 500ltr with dozing pump of capacity 0-10 lph in two numbers with agitator of any make ISI approved.	1.00	Nos	80,276.26	80,276.26
29	Market Rate	Starter Panel For detailed specifications please refer Annexure (Detailed specification of Starter Panel) 8 Nos of DOL starters	8.00	Nos	26,758.75	214,070.03
30	Market Rate	Supply and installation of Cabling in conduit includes POLYCAB / INDOCAB cables & 4 core for Sump Pump 4mm ² Al Armoured)	50.00	Mtr	401.38	20,069.06
31	Market Rate	Supplying and laying 25 mm X 5 mm GI strip at 0.50 meter below ground as strip earth electrode, including connection/ terminating with nut, bolt, spring, washer etc. as required. (Jointing shall be done by overlapping and with 2 sets of brass nut bolt & spring washer spaced at 50mm)	50.00	Mtr	2,087.18	104,359.14

32	Market Rate	Providing & fixing on line Electromagnetic type flow meter cum Totaliser for Monitoring the total flow, Flow rate. etc. Including electrical wiring from panel to flow meter. Complete with all type of Plumbing & Electrical connections, accessories, wiring, conduits & supports complete with all respect. The signal from read out shall be 4-20 m.amps to be received on BAS. (Inlet To STP & Treated water Line of size 250mm)	2.00	Nos	200,690.65	401,381.30
33	18.27.5	Providing and fixing all unit interconnection piping of following sizes /as per drawing Size - 250	50.00	Rmt	4,002.00	200,100.00
34	18.27.1	Providing and fixing all piping required for pumps of following sizes /as per drawing Size - 100	25.00	Rmt	1,201.95	30,048.75
35	Market Rate	Providing and fixing flow control valves of required size for pipe fittings Size - 250 MoC - UPVC	10.00	Nos	25,000.00	250,000.00
36	Market Rate	Providing and fixing butterfly valves of required size for pump fittings Size - 100, MoC -Upvc	6.00	Nos	15,000.00	90,000.00
37	Market Rate	Non return valves for pumps Size - 100mm, MoC - Upvc	4.00	Nos	20,000.00	80,000.00
38	18.17.6	Providing and fixing C.I. gate valves complete with bolts, nuts, rubber insertions etc. (the tail pieces if required will be paid separately) :of 80 mm size	2.00	Nos	2,217.90	4,435.80
39	Market Rate	MS-Portable cabins of size 10'x10'x8'6"	1.00	Nos	147,173.14	147,173.14
		Total MEP				10,846,712.64
		O&M cost for 5 years				

40	O&M sheet	Operation and Maintenance of for 1 year. Payment shall be released quarterly. Duties during O&M: plant to be run 24/7. Adequate security and operators to be provided for proper plant operation. Treated water quality target should be monitored by PMC (random sampling). Equipment's maintenance and repair, replacement and maintenance of plants shall be the responsibility of contractor. Electricity charges shall be paid as per actual usage on producing the bills.	5.00	Years	21,520,516.41	21,520,516.41
Total of MEP and O&M						21,520,516.41
Grand total Civil, MEP, O&M						42,742,118.39
41		Providing detailed hydraulic, P&ID & line drawings & RCC drawings and its approval from competitive agency	1.00	Job	500,000.00	500,000.00
Grand total Civil, MEP, O&M						43,242,118.39
		3rd Party supervision as PMC				864,842.37
Total cost of project						44,106,960.75
NOTE: The item rates and cost are used only for reference and are subjected to vary based on market situations and timely updates in DSR.						

Work Name- 5 MLD MBBR BOQ For Civil & MEP						
Sr. No.	Maharashtra PWD SSR Item No.	Description	Qty.	Units	Rate As per PWD 18-19 (Excluding GST)	Amount
1	21.33	Clearing jungle including uprooting of rank vegetation, grass, brush wood, trees and saplings of girth upto 30 cm measured at a height of 1 m above ground level and removal of rubbish upto a distance of 50 m outside the periphery of the area cleared.	4,620.00	Sq.m	8.00	36,960.00
2	21..02	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means over areas (exceeding 30cm. in depth, 1.5m in width as well as 10sqm. on plan) including disposal of excavated earth, lead up to 50m and lift up to 1.5m disposed earth to be leveled and neatly dressed : All kind of soil.	2,360.93	Cum	143.00	337,613.28
3	21.36	Filling available excavated earth (excluding rocks) in trenches, plinth, sides of foundation etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering lead up to 50m and lift up to 1.5m.	620.25	cum	85.00	52,720.91
4	21.38	Dry stone pitching 22.5 cm thick including supply of stones and preparing surface complete.	168.02	Cum	945.00	158,782.68
5	24.01	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering : All works up to plinth level : M10	95.92	cum	4,257.00	408,314.41

6	5.33.1 & 5.34.1 CPWD-16	Providing and laying in position ready mixed M-30 grade concrete for reinforced cement concrete work, using cement content as per approved design mix, manufactured in fully automatic batching plant and transported to site of work in transit mixer for all leads having continuous agitated mixer, manufactured as per mix design of specified grade for reinforced cement concrete work including pumping of R.M.C. from transit mixer to site of laying , excluding the cost of centering, shuttering finishing and reinforcement including cost of admixtures in recommended proportions as per IS : 9103 to accelerate/ retard setting of concrete, improve workability without impairing strength and durability as per direction of the Engineer - in - charge. (Note :- Cement content considered in this item is @ 330 kg/cum. Excess/less cement used as per design mix is payable/recoverable separately). All works upto plinth level.	732.84	cum	7,319.55	5,364,051.70
7	32.08	20 mm cement plaster with mix:1:3 (1cement:3 fine sand)	4,202.38	sqm	392.00	1,647,332.96
8	32.21	Neat cement punning	4,202.38	sqm	69.00	289,964.22
9	5.9.2 CPWD-16	Centering and shuttering including strutting, propping etc. and removal of form for : Walls (any thickness) including attached pilasters, buttresses, plinth and string courses etc.	2,327.28	sqm	378.60	881,108.21
10	5.9.3 CPWD-16	Centering and shuttering including strutting, propping etc. and removal of form for: Suspended floors, roofs, landings, balconies and access platform.	917.61	sqm	422.30	387,506.70
11	5.9.1 CPWD-16	Centering and shuttering including strutting, propping etc. and removal of form for: Foundation, Raft, PCC	134.86	Sq.m	193.95	26,156.10
12	5.9.5 CPWD-16	Centering and shuttering including strutting, propping etc. and removal of form for: Beams, Lintel Beams	454.50	Sq.m	342.90	155,848.05
13	5.9.6 CPWD-16	Centering and shuttering including strutting, propping etc. and removal of form for: Column	460.80	Sq.m	467.85	215,585.28

14	26.33	Reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding complete: Thermo-Mechanically Treated bars.	73,100.69	kilogram	63.99	4,678,005.57
15	19.19.1.1 CPWD-16	Providing and fixing in position precast R.C.C. manhole cover and frame of required shape and approved quality : of size 600*450 mm	16.00	each	1,073.05	17,168.80
16	23.04	Steel work welded in built up sections/ framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer using structural steel etc. as required. In gratings, frames, guard bar, ladder, railings, brackets, gates and similar works	400.00	Kg	83.52	33,406.40
Note:- Above rate are excluding of GST					Total	14,690,525.27
MEP items						
17	Market Rate	Design, supply, installation, commissioning & testing with satisfactory test & trial of 3 phase fully Submersible Non Clog sewage lifting pumps for sewage transfer from sump well to sedimentation tank with pedestal base frame grouted in foundations. (2 Nos at collection tank , 1 No. extra in standby) Capacity- 208 cum/hr Duty head - 15 Mtr Moc-CI B.H.P - 15 Anchor fastener for mounting rain cap pressure gauge-feeding / AKAI (ISI or DJB approved)	3.00	Nos	450,000.00	1,350,000.00
18	Market Rate	Providing, fixing, testing & commissioning of blower for MBBR tank and poly dosing system for sludge handling with pipe and valve arrangements. (1working + 1 standby) Blower Capacity – 850m ³ /hr@4500mmwc HP – 13.6 MoC - CI Make – Everest/Equi.	2.00	Nos	750,750.00	1,501,500.00

19	Market Rate	Providing, fixing, testing & commissioning of Air Diffusors of following specification Size-63mmODx1000mm length,MoC- Silicon, Make- Sadan-cogen/ Vibro Retrievable type	241.00	Nos	9,900.74	297,022.16
20	Market Rate	Providing, fixing, testing & commissioning of Tube Settler Media with Base support of specification Square Tube , black colour, Thickness 1 mm , Vertical Ht. 1000 mm, UV Stabilized, Moc- PVC, Make- Marvellous Plastic/ MM Aqua	208.00	Cum	33,448.44	6,957,275.82
21	Market Rate	Providing, fixing, testing & commissioning of MBBR & anoxic tank Media of following specification MoC-PP, Size-20mmx15mm, 1m3-100000/-pieces	624.70	cu.m	27,427.72	1,316,530.65
22	Market Rate	Providing, fixing, testing & commissioning of Decanter feed pumps Make:- Kirloskar, Capacity-10-20m3/hr@15mtr head, Type- Mono block Mud Pump , Hp-1	2.00	Nos	46,827.82	93,655.64
23	Market Rate	Supply & installation of Decanter for sludge thickening (As per specifications attached as annexure)	1.00	Nos	1,950,000.00	1,950,000.00
24	Market Rate	Providing, fixing, testing & commissioning of Poly dosing system for Decanter Dosing Tank-1000 Ltr, MoC- HDPE, Make- Sintex, Qty-1 Nos., Dosing Pump-0-50 lph, Make- Milton Roy, MoC- PP,Qty- 2 Nos	1.00	Nos	375,000.00	375,000.00
25	Market Rate	Providing and setting up Ozonator of capacity 875gm/hr of O2.	1.00	Nos	2,000,000.00	2,000,000.00
26	Market Rate	Starter Panel For detailed specifications please refer Annexure (Detailed specification of Starter Panel) 8 Nos of DOL starters	8.00	Nos	26,758.75	214,070.03
27	Market Rate	Supply and installation of Cabling in conduit includes POLYCAB / INDOCAB cables & 4 core for Sump Pump 4mm2 Al Armoured)	150.00	Mtr	401.38	60,207.19

28	Market Rate	Supplying and laying 25 mm X 5 mm GI strip at 0.50 meter below ground as strip earth electrode, including connection/ terminating with nut, bolt, spring, washer etc. as required. (Jointing shall be done by overlapping and with 2 sets of brass nut bolt & spring washer spaced at 50mm)	150.00	Mtr	2,087.18	313,077.41
29	Market Rate	Providing & fixing on line Flange type Ultrasonic Flow meter for Monitoring the total flow, Flow rate. etc. Including electrical wiring from panel to flow meter. Complete with all type of Plumbing & Electrical connections, accessories, wiring, conduits & supports complete with all respect.(Inlet To STP & Treated water Line) - Size - 500mm dia	2.00	Nos	735,000.00	1,470,000.00
30	18.27.9	Providing and fixing all unit interconnection piping of following sizes /as per drawing Size - 500	150.00	Rmt	11,969.15	1,795,372.50
31	18.27.5	Providing and fixing all piping required for pumps of following sizes /as per drawing Size - 250	50.00	Rmt	4,002.00	200,100.00
32	Market Rate	Providing and fixing flow control valves of required size for pipe fittings Size - 500 MoC - UPVC	10.00	Nos	45,524.00	455,240.00
33	Market Rate	Providing and fixing butterfly valves of required size for pump fittings Size - 250, MoC -Upvc	6.00	Nos	27,530.00	165,180.00
34	Market Rate	Non return valves for pumps Size - 250mm, MoC - Upvc	4.00	Nos	39,485.00	157,940.00
35	18.17.6	Providing and fixing C.I. gate valves complete with bolts, nuts, rubber insertions etc. (the tail pieces if required will be paid separately) :of 80 mm size	2.00	Nos	2,217.90	4,435.80
36	Market Rate	MS-Portable cabins of size 10'x10'x8'6"	1.00	Nos	147,173.14	147,173.14
		Total MEP				20,823,780.34
		O&M cost for 5 years				

37	O&M sheet	Operation and Maintenance of for 1 year. Payment shall be released quarterly. Duties during O&M: plant to be run 24/7. Adequate security and operators to be provided for proper plant operation. Treated water quality target should be monitored by PMC (random sampling). Equipments maintenance and repair, replacement and maintenance of plants shall be the responsibility of contractor. Electricity charges shall be paid as per actual usage on producing the bills.	5.00	Years	49,163,652.02	49,163,652.02
Total of MEP and O&M						49,163,652.02
38		Providing detailed hydraulic, P&ID & line drawings & RCC drawings and its approval from competitive agency	1.00	Job	500,000.00	500,000.00
Grand total Civil, MEP, O&M						85,177,957.64
39		3rd Party supervision as PMC				1,703,559.15
Total cost of project						86,881,516.79
NOTE: The item rates and cost are used only for reference and are subjected to vary based on market situations and timely updates in DSR.						

Work Name- 10 MLD MBBR BOQ For Civil & MEP						
Sr. No.	Maharashtra PWD SSR Item No.	Description	Qty.	Units	Rate As per PWD 18-19 (Excluding GST)	Amount
1	21.33	Clearing jungle including uprooting of rank vegetation, grass, brush wood, trees and saplings of girth upto 30 cm measured at a height of 1 m above ground level and removal of rubbish upto a distance of 50 m outside the periphery of the area cleared.	4,221.80	Sq.m	8.00	33,774.40
2	21..02	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means over areas (exceeding 30cm. in depth, 1.5m in width as well as 10sqm. on plan) including disposal of excavated earth, lead up to 50m and lift up to 1.5m disposed earth to be leveled and neatly dressed : All kind of soil.	4,857.50	Cum	143.00	694,622.15
3	21.36	Filling available excavated earth (excluding rocks) in trenches, plinth, sides of foundation etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering lead up to 50m and lift up to 1.5m.	860.09	cum	85.00	73,107.93
4	21.38	Dry stone pitching 22.5 cm thick including supply of stones and preparing surface complete.	456.00	Cum	945.00	430,918.82
5	24.01	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering : All works up to plinth level : M10	278.05	cum	4,257.00	1,183,678.94

6	5.33.1 & 5.34.1 CPWD-16	Providing and laying in position ready mixed M-30 grade concrete for reinforced cement concrete work, using cement content as per approved design mix, manufactured in fully automatic batching plant and transported to site of work in transit mixer for all leads having continuous agitated mixer, manufactured as per mix design of specified grade for reinforced cement concrete work including pumping of R.M.C. from transit mixer to site of laying , excluding the cost of centering, shuttering finishing and reinforcement including cost of admixtures in recommended proportions as per IS : 9103 to accelerate/ retard setting of concrete, improve workability without impairing strength and durability as per direction of the Engineer - in - charge. (Note :- Cement content considered in this item is @ 330 kg/cum. Excess/less cement used as per design mix is payable/recoverable separately). All works upto plinth level.	1,083.79	cum	7,319.55	7,932,824.94
7	32.08	20 mm cement plaster with mix:1:3 (1cement:3 fine sand)	6,837.33	sqm	392.00	2,680,233.60
8	32.21	Neat cement punning	6,837.33	sqm	69.00	471,775.81
9	5.9.2 CPWD-16	Centering and shuttering including strutting, propping etc. and removal of form for : Walls (any thickness) including attached pilasters, buttresses, plinth and string courses etc.	3,307.00	sqm	378.60	1,252,031.71
10	5.9.3 CPWD-16	Centering and shuttering including strutting, propping etc. and removal of form for: Suspended floors, roofs, landings, balconies and access platform.	1,536.90	sqm	422.30	649,032.87
11	5.9.1 CPWD-16	Centering and shuttering including strutting, propping etc. and removal of form for: Foundation, Raft, PCC	150.01	Sq.m	193.95	29,093.82
12	5.9.5 CPWD-16	Centering and shuttering including strutting, propping etc. and removal of form for: Beams, Lintel Beams	433.08	Sq.m	342.90	148,503.13
13	5.9.6 CPWD-16	Centering and shuttering including strutting, propping etc. and removal of form for: Column	345.60	Sq.m	467.85	161,688.96

14	26.33	Reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding complete: Thermo-Mechanically Treated bars.	108,107.64	kilogram	63.99	6,918,240.41
15	19.19.1.1 CPWD- 16	Providing and fixing in position precast R.C.C. manhole cover and frame of required shape and approved quality : of size 600*450 mm	16.00	each	1,073.05	17,168.80
16	23.04	Steel work welded in built up sections/ framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer using structural steel etc. as required. In gratings, frames, guard bar, ladder, railings, brackets, gates and similar works	400.00	Kg	83.52	33,406.40
Note:- Above rate are excluding of GST					Total	22,710,102.70

MEP items						
17	Market Rate	Design, supply, installation, commissioning & testing with satisfactory test & trial of 3 phase fully Submersible Non Clog sewage lifting pumps for sewage transfer from sump well to sedimentation tank with pedestal base frame grouted in foundations. (2 Nos at Sumpwell , 1 No. extra in standby) Capacity- 416 cum/hr Duty head - 15 Mtr Moc-CI B.H.P - 25 Anchor fastener for mounting rain cap pressure gauge-feeding / AKAI (ISI or DJB approved)	3.00	Nos	725,345.00	2,176,035.00
18	Market Rate	Providing, fixing, testing & commissioning of blower for MBBR tank and poly dosing system for sludge handling with pipe and valve arrangements. (1working + 1 standby) Blower Capacity – 1679m3/hr@4500mmwc HP – 23.3 MoC - CI Make – Everest/Equi.	2.00	Nos	750,750.00	1,501,500.00

19	Market Rate	Providing, fixing, testing & commissioning of Air Diffusors of following specification Size-63mmODx1000mm length,MoC- Silicon, Make- Sadan-cogen/ Vibro Retrievable type	482.00	Nos	9,900.74	4,772,156.04
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20	Market Rate	<p>Primary Clarifier Mechanism with Suitable for mounting on RCC Tank of size 19 mt. Dia.x 2.5 mt.SWD+0.3MT.FB</p> <p>Access Bridge :- M.S. Fabricated with full walkway with 1000 mm width & length is 19 mtr. Chequered plate walkway of 5 mm thick and hand railings made of 32 / 25 NB 'B' class pipes of 1.00 meter high from one end of the bridge to the drive center and a meter beyond</p> <p>Drive:- Central driven by worm & worm wheel through chain & Sprocket connected to motor, RPM of central Scrapper is 4-5 RPH,Couple with gear box.</p> <p>Motor:- 5Hp , 4 pole,3 ph,440 volts AC, Make- Crompton/ Equivalent, Type- Foot Mounted</p> <p>Gear Box:- Radicon/Equiv, Input PRM-1440.</p> <p>Central Shaft:- M.S. epoxy painted central shaft of heavy pipe construction ,coupled with drive housing.</p> <p>Scrappers:-M.S. Epoxy painted scrapper arms of structural frame work with blades to sweep the tank bottom twice per revolution. MoC- MSEP, Material 50x50x5 mm Angle Frame, with ISMC Support .Scrapper provided with neoprene rubber squeezes to collect the sludge at the centre point. Clarifier rake arms, two nos., made of channels and suitably braced with MS angles, duly welded with blades, made of 5 mm plates, 760 mm long , will be positioned on either side of the vertical shaft.</p> <p>Scum Scraping Mechanism:- MoC- MSEP. , Size:- 0.3mx 9.25 m, Material :- MS Palte 6 mm thickness with 50x50x5 mm angle</p> <p>Feed Well:- M.S. Fabricated , Supported from the bridge Dia:-3M. & Height 2 mtr, Material :- MS Plate 6 mm Thickness , with 50x50x5mm thickness Angle. Painting:- All wetted parts will be painted with 2 coats of enamel paint.</p> <p>Weir plates along with fixing bolts :- Size :- 21.5M Dia , & 0.4m Height, MoC- MSEP, Plate thickness 6 mm</p>	1.00	Nos	2,350,000.00	2,350,000.00
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21	Market Rate	Providing, fixing, testing & commissioning of MBBR & anoxic tank Media of following specification MoC-PP, Size-20mmx15mm, 1m ³ -100000/-pieces	1,215.20	cu.m	27,427.72	33,330,167.75
22	Market Rate	Providing, fixing, testing & commissioning of Decanter feed pumps Make:- Kirloskar, Capacity- 20-30m ³ /hr@15mtr head, Type- Mono block Mud Pump , Hp-1	2.00	Nos	67,350.00	134,700.00
23	Market Rate	Supply & installation of Decanter for sludge thickening (As per specifications attached as annexure)	1.00	Nos	2,300,000.00	2,300,000.00
24	Market Rate	Providing, fixing, testing & commissioning of Poly dosing system for Decanter Dosing Tank-2000 Ltr, MoC- HDPE, Make- Sintex, Qty-1 Nos., Dosing Pump-0-100 lph, Make- Milton Roy, MoC-PP,Qty- 2 Nos	1.00	Nos	450,000.00	450,000.00
25	Market Rate	Providing and setting up Ozonator of capacity 2375gm/hr of O ₂ .	1.00	Nos	4,600,000.00	4,600,000.00
26	Market Rate	Starter Panel For detailed specifications please refer Annexure (Detailed specification of Starter Panel) 8 Nos of DOL starters	8.00	Nos	26,758.75	214,070.03
27	Market Rate	Supply and installation of Cabling in conduit includes POLYCAB / INDOCAB cables & 4 core for Sump Pump 4mm ² Al Armoured)	200.00	Mtr	401.38	80,276.26
28	Market Rate	Supplying and laying 25 mm X 5 mm GI strip at 0.50 meter below ground as strip earth electrode, including connection/ terminating with nut, bolt, spring, washer etc. as required. (Jointing shall be done by overlapping and with 2 sets of brass nut bolt & spring washer spaced at 50mm)	200.00	Mtr	2,087.18	417,436.55

29	Market Rate	Providing & fixing on line Flange type Ultrasonic Flow meter for Monitoring the total flow, Flow rate. etc. Including electrical wiring from panel to flow meter. Complete with all type of Plumbing & Electrical connections, accessories, wiring, conduits & supports complete with all respect.(Inlet To STP & Treated water Line) - Size - 600mm dia	2.00	Nos	1,135,000.00	2270000
30	18.27.11	Providing and fixing all unit interconnection piping of following sizes /as per drawing Size - 600	150.00	Rmt	16,722.75	2,508,412.50
31	18.27.7	Providing and fixing all piping required for pumps of following sizes /as per drawing Size - 350	50.00	Rmt	6,472.60	323,630.00
32	Market Rate	Providing and fixing flow control valves of required size for pipe fittings Size - 600 MoC - UPVC	10.00	Nos	75,625.00	756,250.00
33	Market Rate	Providing and fixing butterfly valves of required size for pump fittings Size - 350, MoC -Upvc	6.00	Nos	45,600.00	273,600.00
34	Market Rate	Non return valves for pumps Size - 350mm, MoC - Upvc	4.00	Nos	68,350.00	273,400.00
35	18.17.6	Providing and fixing C.I. gate valves complete with bolts, nuts, rubber insertions etc. (the tail pieces if required will be paid separately) : of 80 mm size	2.00	Nos	2,217.90	4,435.80
36	Market Rate	MS-Portable cabins of size 10'x10'x8'6"	1.00	Nos	147,173.14	147,173.14
		Total MEP				58,883,243.06
		O&M cost for 5 years				
37	O&M sheet	Operation and Maintenance of for 1 year. Payment shall be released quarterly. Duties during O&M: plant to be run 24/7. Adequate security and operators to be provided for proper plant operation. Treated water quality target should be monitored by PMC (random sampling). Equipments maintenance and repair, replacement and maintenance of plants shall be the responsibility of contractor. Electricity charges shall be paid as per actual usage on producing the bills.	5.00	Years	87,392,083.78	87,392,083.78

Total of MEP and O&M						87,392,083.78
38		Providing detailed hydraulic, P&ID & line drawings & RCC drawings and its approval from competitive agency	1.00	Job	500,000.00	500,000.00
Grand total Civil, MEP, O&M						169,485,429.54
39		3rd Party supervision as PMC				3,389,708.59
Total cost of project						172,875,138.13
NOTE: The item rates and cost are used only for reference and are subjected to vary based on market situations and timely updates in DSR.						

Work Name- 1 MLD ASP BOQ For Civil & MEP						
Sr. No.	Maharashtra PWD SSR Item No.	Description	Qty.	Units	Rate As per PWD 18-19 (Excluding GST)	Amount
1	21.33	Clearing jungle including uprooting of rank vegetation, grass, brush wood, trees and saplings of girth upto 30 cm measured at a height of 1 m above ground level and removal of rubbish upto a distance of 50 m outside the periphery of the area cleared.	3,175.50	Sq.m	8.00	25,404.00
2	21..02	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means over areas (exceeding 30cm. in depth, 1.5m in width as well as 10sqm. on plan) including disposal of excavated earth, lead up to 50m and lift up to 1.5m disposed earth to be leveled and neatly dressed : All kind of soil.	832.62	Cum	143.00	119,063.95
3	21.36	Filling available excavated earth (excluding rocks) in trenches, plinth, sides of foundation etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering lead up to 50m and lift up to 1.5m.	737.18	cum	85.00	62,660.17
4	21.38	Dry stone pitching 22.5 cm thick including supply of stones and preparing surface complete.	64.59	Cum	945.00	61,040.39
5	24.01	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering : All works up to plinth level : M10	33.26	cum	4,257.00	141,596.33

6	5.33.1 & 5.34.1 CPWD-16	Providing and laying in position ready mixed M-30 grade concrete for reinforced cement concrete work, using cement content as per approved design mix, manufactured in fully automatic batching plant and transported to site of work in transit mixer for all leads having continuous agitated mixer, manufactured as per mix design of specified grade for reinforced cement concrete work including pumping of R.M.C. from transit mixer to site of laying , excluding the cost of centering, shuttering finishing and reinforcement including cost of admixtures in recommended proportions as per IS : 9103 to accelerate/ retard setting of concrete, improve workability without impairing strength and durability as per direction of the Engineer - in - charge. (Note :- Cement content considered in this item is @ 330 kg/cum. Excess/less cement used as per design mix is payable/recoverable separately). All works upto plinth level.	409.14	cum	7,319.55	2,994,716.15
7	32.08	20 mm cement plaster with mix:1:3 (1cement:3 fine sand)	1,936.45	sqm	392.00	759,086.44
8	32.21	Neat cement punning	1,936.45	sqm	69.00	133,614.71
9	5.9.2 CPWD-16	Centering and shuttering including strutting, propping etc. and removal of form for : Walls (any thickness) including attached pilasters, buttresses, plinth and string courses etc.	979.32	sqm	378.60	370,770.55
10	5.9.3 CPWD-16	Centering and shuttering including strutting, propping etc. and removal of form for: Suspended floors, roofs, landings, balconies and access platform.	295.50	sqm	422.30	124,789.65
11	5.9.1 CPWD-16	Centering and shuttering including strutting, propping etc. and removal of form for: Foundation, Raft, PCC	92.78	Sq.m	193.95	17,994.68
12	5.9.5 CPWD-16	Centering and shuttering including strutting, propping etc. and removal of form for: Beams, Lintel Beams	247.86	Sq.m	342.90	84,991.19
13	5.9.6 CPWD-16	Centering and shuttering including strutting, propping etc. and removal of form for: Column	345.60	Sq.m	467.85	161,688.96
14	26.33	Reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding complete: Thermo-Mechanically Treated bars.	40,811.65	kilogram	63.99	2,611,700.93
15	19.19.1.1 CPWD-16	Providing and fixing in position precast R.C.C. manhole cover and frame of required shape and approved quality : of size 600*450 mm	16.00	each	1,073.05	17,168.80

16	23.04	Steel work welded in built up sections/ framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer using structural steel etc. as required. In gratings, frames, guard bar, ladder, railings, brackets, gates and similar works	400.00	Kg	83.52	33,406.40
Note:- Above rate are excluding of GST					Total	7,719,693.30
MEP items						
17	Market Rate	Design, supply, installation, commissioning & testing with satisfactory test & trial of 3 phase fully Submersible Non Clog sewage lifting pumps for sewage transfer from collection sump to tube settler tank with pedestal base frame grouted in foundations. (2 Nos at collection tank , 1 No. extra in standby) Capacity- 41.5 cum/hr Duty head - 15 Mtr Moc-CI B.H.P - 5 Anchor fastener for mounting rain cap pressure gauge-feeding / AKAI (ISI or DJB approved)	3.00	Nos	227,449.40	682,348.21
18	Market Rate	Supply, installation, testing and commissioning of vertical self-supporting Multi grade Sand Filter. Filter shall be constructed of MSEP material as per manufacturer standard. The inner distribution system and the under bed draw off system shall be of Hub & Lateral type with top & bottom strainers. Filter shall be supplied with initial charge of Filter media like special graded sand with supporting media like silex, gravel etc. The filter shall complete with pressure gauge at inlet & outlet, sample cock, ms piping/interconnected ms piping and all necessary accessories. Capacity – 55.0m3/hr Pressure – 3.5Kg/cm2 Dimension – 2500mm Ø & 2500mm ht. Sampling port – 12mm Media – 100mm, 50mm, 25mm & 10mm	1.00	Nos	602,071.95	602,071.95

19	Market Rate	<p>Supply, installation, testing and commissioning of vertical self supporting Activated Carbon Filter. Filter shall be constructed of MS Epoxy lining material as per manufacturer standard. The inner distribution system and the under bed draw off system shall be of Hub & Lateral type with top & bottom strainers. Filter shall be supplied with initial charge of media like Activated Carbon Media of 900 iodine value, with supporting media like silex, gravel etc. The filter shall complete with pressure gauge at inlet & outlet, sample cock, ms piping/interconnected ms piping and all necessary accessories.</p> <p>Capacity – 55.0m³/hr Pressure – 3.5Kg/cm² Dimension – 2500mm Ø & 2500mm ht. Sampling port – 12mm Media – 100mm, 50mm, 25mm & 10mm</p>	1.00	Nos	695,727.58	695,727.58
20	Market Rate	<p>Providing, fixing, testing and commissioning of Horizontal self priming/ mono-block filter feed pumps for filtration. The pumps shall be made of CI casing, CI Impellar, SS shaft & sleeve, Mechanical Seal are connected to a TEFC induction motor mounted on a common channel base frame with coupling guard, , including all necessary piping, suction and delivery header, individual suction & delivery of pump valves, NRV, pressure gauge and other accessories and concrete foundation complete as required.</p> <p>Capacity- 55 cum/hr Type - self priming/ monoblock Duty head - 36 Mtr Moc-CI B.H.P - 5 Anchor fastener for mounting rain cap pressure gauge-feeding / AKAI (ISI or DJB approved)</p>	3.00	Nos	147,173.14	441,519.43

21	Market Rate	Providing, fixing, testing & commissioning of blower for MBBR tank and poly dosing system for sludge handling with pipe and valve arrangements. (1working + 1 standby) Blower Capacity – 569m ³ /hr@4500mmwc HP – 9 MoC - CI Make – Everest/Equi.	2.00	Nos	950,000.00	1,900,000.00
22	Market Rate	Providing, fixing, testing & commissioning of Air Diffusers of following specification Size-63mmODx2000mm length, MoC- Silicon, Make- Sadan-cogen/ Vibro Retrievable type	114.00	Nos	14,350.00	1,635,900.00
23	Market Rate	Providing, fixing, testing & commissioning of Tube Settler Media with Base support of specification Square Tube , black colour, Thickness 1 mm , Vertical Ht. 1000 mm, UV Stabilized, Moc- PVC, Make- Marvellous Plastic/ MM Aqua	41.70	cu.m	33,448.44	1,394,800.01
24		Providing, fixing, testing & commissioning of Sludge recycle pumps Make:- Kirloskar, Capacity-5-10m ³ /hr@15mtr head, Type- Mono block Mud Pump , Hp-1	2.00	Nos	46,827.82	93,655.64
25	Market Rate	Providing, fixing, testing & commissioning of Filter press feed pumps Make:- Kirloskar, Capacity-5-10m ³ /hr@15mtr head, Type- Mono block Mud Pump , Hp-1	2.00	Nos	46,827.82	93,655.64
26	Market Rate	Providing, fixing, testing & commissioning of FILTER PRESS 1200MM X 1200MM X 60 chambers PP recess plate type with lock nut type hydraulic closing device with one set filter cloth	1.00	Nos	600,000.00	600,000.00
27	Market Rate	Providing, fixing, testing & commissioning of Poly dosing system for Filter press Dosing Tank-500 Ltr, MoC- HDPE, Make- Sintex, Qty- 1 Nos., Dosing Pump-0-30 lph, Make- Milton Roy, MoC- PP,Qty- 2 Nos	1.00	Nos	295,000.00	295,000.00
28	Market Rate	Providing and setting up Hypo-Chloride Dozing System(HDPE make) of tank capacity 500ltr with dozing pump of capacity 0-10 lph in two numbers with agitator of any make ISI approved.	1.00	Nos	80,276.26	80,276.26

29	Market Rate	Starter Panel For detailed specifications please refer Annexure (Detailed specification of Starter Panel) 8 Nos of DOL starters	8.00	Nos	26,758.75	214,070.03
30	Market Rate	Supply and installation of Cabling in conduit includes POLYCAB / INDOCAB cables & 4 core for Sump Pump 4mm2 Al Armoured)	50.00	Mtr	401.38	20,069.06
31	Market Rate	Supplying and laying 25 mm X 5 mm GI strip at 0.50 meter below ground as strip earth electrode, including connection/ terminating with nut, bolt, spring, washer etc. as required. (Jointing shall be done by overlapping and with 2 sets of brass nut bolt & spring washer spaced at 50mm)	50.00	Mtr	2,087.18	104,359.14
32	Market Rate	Providing & fixing on line Electromagnetic type flow meter cum Totaliser for Monitoring the total flow, Flow rate. etc. Including electrical wiring from panel to flow meter. Complete with all type of Plumbing & Electrical connections, accessories, wiring, conduits & supports complete with all respect. The signal from read out shall be 4-20 m.amps to be received on BAS. (Inlet To STP & Treated water Line of size 250mm)	2.00	Nos	200,690.65	401,381.30
33	18.27.5	Providing and fixing all unit interconnection piping of following sizes /as per drawing Size - 250	50.00	Rmt	4,002.00	200,100.00
34	18.27.1	Providing and fixing all piping required for pumps of following sizes /as per drawing Size - 100	25.00	Rmt	1,201.95	30,048.75
35	Market Rate	Providing and fixing flow control valves of required size for pipe fittings Size - 250 MoC - UPVC	10.00	Nos	25,000.00	250,000.00
36	Market Rate	Providing and fixing butterfly valves of required size for pump fittings Size - 100, MoC -Upvc	6.00	Nos	15,000.00	90,000.00
37	Market Rate	Non return valves for pumps Size - 100mm, MoC - Upvc	4.00	Nos	20,000.00	80,000.00
38	18.17.6	Providing and fixing C.I. gate valves complete with bolts, nuts, rubber insertions etc. (the tail pieces if required will be paid separately) :of 80 mm size	2.00	Nos	2,217.90	4,435.80
39	Market Rate	MS-Portable cabins of size 10'x10'x8'6"	1.00	Nos	147,173.14	147,173.14
		Total MEP				10,056,591.92

O&M cost for 5 years						
40	O&M sheet	Operation and Maintenance of for 1 year. Payment shall be released quarterly. Duties during O&M: plant to be run 24/7. Adequate security and operators to be provided for proper plant operation. Treated water quality target should be monitored by PMC (random sampling). Equipment's maintenance and repair, replacement and maintenance of plants shall be the responsibility of contractor. Electricity charges shall be paid as per actual usage on producing the bills.	5.00	Years	18,235,449.66	18,235,449.66
Total O&M						18,235,449.66
41		Providing detailed hydraulic, P&ID & line drawings & RCC drawings and its approval from competitive agency	1.00	Job	500,000.00	500,000.00
Grand total Civil, MEP, O&M						36,511,734.88
		3rd Party supervision as PMC				730,234.70
Total cost of project						37,241,969.58
NOTE: The item rates and cost are used only for reference and are subjected to vary based on market situations and timely updates in DSR.						

Work Name- 5 MLD ASP BOQ For Civil & MEP						
Sr. No.	Maharashtra PWD SSR Item No.	Description	Qty.	Units	Rate As per PWD 18-19 (Excluding GST)	Amount
1	21.33	Clearing jungle including uprooting of rank vegetation, grass, brush wood, trees and saplings of girth upto 30 cm measured at a height of 1 m above ground level and removal of rubbish upto a distance of 50 m outside the periphery of the area cleared.	5,757.50	Sq.m	8.00	46,060.00
2	21.02	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means over areas (exceeding 30cm. in depth, 1.5m in width as well as 10sqm. on plan) including disposal of excavated earth, lead up to 50m and lift up to 1.5m disposed earth to be leveled and neatly dressed : All kind of soil.	2,360.93	Cum	143.00	337,613.28
3	21.36	Filling available excavated earth (excluding rocks) in trenches, plinth, sides of foundation etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering lead up to 50m and lift up to 1.5m.	620.25	cum	85.00	52,720.91
4	21.38	Dry stone pitching 22.5 cm thick including supply of stones and preparing surface complete.	168.02	Cum	945.00	158,782.68
5	24.01	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering : All works up to plinth level : M10	95.92	cum	4,257.00	408,314.41

6	5.33.1 & 5.34.1 CPWD-16	Providing and laying in position ready mixed M-30 grade concrete for reinforced cement concrete work, using cement content as per approved design mix, manufactured in fully automatic batching plant and transported to site of work in transit mixer for all leads having continuous agitated mixer, manufactured as per mix design of specified grade for reinforced cement concrete work including pumping of R.M.C. from transit mixer to site of laying , excluding the cost of centering, shuttering finishing and reinforcement including cost of admixtures in recommended proportions as per IS : 9103 to accelerate/ retard setting of concrete, improve workability without impairing strength and durability as per direction of the Engineer - in - charge. (Note :- Cement content considered in this item is @ 330 kg/cum. Excess/less cement used as per design mix is payable/recoverable separately). All works upto plinth level.	826.08	cum	7,319.55	6,046,526.54
7	32.08	20 mm cement plaster with mix:1:3 (1cement:3 fine sand)	4,983.58	sqm	392.00	1,953,563.36
8	32.21	Neat cement punning	4,983.58	sqm	69.00	343,867.02
9	5.9.2 CPWD-16	Centering and shuttering including strutting, propping etc. and removal of form for : Walls (any thickness) including attached pilasters, buttresses, plinth and string courses etc.	2,579.28	sqm	378.60	976,515.41
10	5.9.3 CPWD-16	Centering and shuttering including strutting, propping etc. and removal of form for: Suspended floors, roofs, landings, balconies and access platform.	1,182.21	sqm	422.30	499,247.28
11	5.9.1 CPWD-16	Centering and shuttering including strutting, propping etc. and removal of form for: Foundation, Raft, PCC	134.86	Sq.m	193.95	26,156.10
12	5.9.5 CPWD-16	Centering and shuttering including strutting, propping etc. and removal of form for: Beams, Lintel Beams	530.10	Sq.m	342.90	181,771.29
13	5.9.6 CPWD-16	Centering and shuttering including strutting, propping etc. and removal of form for: Column	460.80	Sq.m	467.85	215,585.28

14	26.33	Reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding complete: Thermo-Mechanically Treated bars.	82,401.38	kilogram	63.99	5,273,193.93
15	19.19.1.1 CPWD- 16	Providing and fixing in position precast R.C.C. manhole cover and frame of required shape and approved quality : of size 600*450 mm	16.00	each	1,073.05	17,168.80
16	23.04	Steel work welded in built up sections/ framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer using structural steel etc. as required. In gratings, frames, guard bar, ladder, railings, brackets, gates and similar works	400.00	Kg	83.52	33,406.40
Note:- Above rate are excluding of GST					Total	16,570,492.69
MEP items						
17	Market Rate	Design, supply, installation, commissioning & testing with satisfactory test & trial of 3 phase fully Submersible Non Clog sewage lifting pumps for sewage transfer from sump well to sedimentation tank with pedestal base frame grouted in foundations. (2 Nos at collection tank , 1 No. extra in standby) Capacity- 208 cum/hr Duty head - 15 Mtr Moc-CI B.H.P - 15 Anchor fastener for mounting rain cap pressure gauge-feeding / AKAI (ISI or DJB approved)	3.00	Nos	450,000.00	1,350,000.00
18	Market Rate	Providing, fixing, testing & commissioning of blower for MBBR tank and poly dosing system for sludge handling with pipe and valve arrangements. (1working + 1 standby) Blower Capacity – 2846m3/hr@4500mmwc HP – 41.7 MoC - CI Make – Everest/Equi.	2.00	Nos	1,350,000.00	2,700,000.00

19	Market Rate	Providing, fixing, testing & commissioning of Air Diffusors of following specification Size-63mmODx2000mm length,MoC- Silicon, Make- Sadan-cogen/ Vibro Retrievable type	570.00	Nos	14,350.00	297,022.16
20	Market Rate	Providing, fixing, testing & commissioning of Tube Settler Media with Base support of specification Square Tube , black colour, Thickness 1 mm , Vertical Ht. 1000 mm, UV Stabilized, Moc- PVC, Make- Marvelous Plastic/ MM Aqua	208.00	Cum	33,448.44	6,957,275.82
21	Market Rate	Providing, fixing, testing & commissioning of Sludge recycle pumps Make:- Kirloskar, Capacity-10-20m3/hr@15mtr head, Type- Mono block Mud Pump , Hp-1	2.00	Nos	46,827.82	93,655.64
22	Market Rate	Providing, fixing, testing & commissioning of Decanter feed pumps Make:- Kirloskar, Capacity-10-20m3/hr@15mtr head, Type- Mono block Mud Pump , Hp-1	2.00	Nos	46,827.82	93,655.64
23	Market Rate	Supply & installation of Decanter for sludge thickening (As per specifications attached as annexure)	1.00	Nos	1,950,000.00	1,950,000.00
24	Market Rate	Providing, fixing, testing & commissioning of Poly dosing system for Decanter Dosing Tank-1000 Ltr, MoC- HDPE, Make- Sintex, Qty-1 Nos., Dosing Pump-0-50 lph, Make- Milton Roy, MoC- PP,Qty- 2 Nos	1.00	Nos	375,000.00	375,000.00
25	Market Rate	Providing and setting up Ozonator of capacity 875gm/hr of O2.	1.00	Nos	2,000,000.00	2,000,000.00
26	Market Rate	Starter Panel For detailed specifications please refer Annexure (Detailed specification of Starter Panel) 8 Nos of DOL starters	8.00	Nos	26,758.75	214,070.03
27	Market Rate	Supply and installation of Cabling in conduit includes POLYCAB / INDOCAB cables & 4 core for Sump Pump 4mm2 Al Armoured)	150.00	Mtr	401.38	60,207.19

28	Market Rate	Supplying and laying 25 mm X 5 mm GI strip at 0.50 meter below ground as strip earth electrode, including connection/ terminating with nut, bolt, spring, washer etc. as required. (Jointing shall be done by overlapping and with 2 sets of brass nut bolt & spring washer spaced at 50mm)	150.00	Mtr	2,087.18	313,077.41
29	Market Rate	Providing & fixing on line Flange type Ultrasonic Flow meter for Monitoring the total flow, Flow rate. etc. Including electrical wiring from panel to flow meter. Complete with all type of Plumbing & Electrical connections, accessories, wiring, conduits & supports complete with all respect.(Inlet To STP & Treated water Line) - Size - 500mm dia	2.00	Nos	735,000.00	1,470,000.00
30	18.27.9	Providing and fixing all unit interconnection piping of following sizes /as per drawing Size - 500	150.00	Rmt	11,969.15	1,795,372.50
31	18.27.5	Providing and fixing all piping required for pumps of following sizes /as per drawing Size - 250	50.00	Rmt	4,002.00	200,100.00
32	Market Rate	Providing and fixing flow control valves of required size for pipe fittings Size - 500 MoC - UPVC	10.00	Nos	45,524.00	455,240.00
33	Market Rate	Providing and fixing butterfly valves of required size for pump fittings Size - 250, MoC -Upvc	6.00	Nos	27,530.00	165,180.00
34	Market Rate	Non return valves for pumps Size - 250mm, MoC - Upvc	4.00	Nos	39,485.00	157,940.00
35	18.17.6	Providing and fixing C.I. gate valves complete with bolts, nuts, rubber insertions etc. (the tail pieces if required will be paid separately) : of 80 mm size	2.00	Nos	2,217.90	4,435.80
36	Market Rate	MS-Portable cabins of size 10'x10'x8'6"	1.00	Nos	147,173.14	147,173.14
		Total MEP				20,799,405.32
		O&M cost for 5 years				

37	O&M sheet	Operation and Maintenance of for 1 year. Payment shall be released quarterly. Duties during O&M: plant to be run 24/7. Adequate security and operators to be provided for proper plant operation. Treated water quality target should be monitored by PMC (random sampling). Equipment's maintenance and repair, replacement and maintenance of plants shall be the responsibility of contractor. Electricity charges shall be paid as per actual usage on producing the bills.	5.00	Years	28,482,325.89	28,482,325.89
Total of MEP and O&M						28,482,325.89
38		Providing detailed hydraulic, P&ID & line drawings & RCC drawings and its approval from competitive agency	1.00	Job	500,000.00	500,000.00
Grand total Civil, MEP, O&M						66,352,223.91
39		3rd Party supervision as PMC				1,327,044.48
Total cost of project						67,679,268.38
NOTE: The item rates and cost are used only for reference and are subjected to vary based on market situations and timely updates in DSR.						

Work Name- 10 MLD ASP BOQ For Civil & MEP						
Sr. No.	Maharashtra PWD SSR Item No.	Description	Qty.	Units	Rate As per PWD 18-19 (Excluding GST)	Amount
1	21.33	Clearing jungle including uprooting of rank vegetation, grass, brush wood, trees and saplings of girth upto 30 cm measured at a height of 1 m above ground level and removal of rubbish upto a distance of 50 m outside the periphery of the area cleared.	5,908.80	Sq.m	8.00	47,270.40
2	21..02	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means over areas (exceeding 30cm. in depth, 1.5m in width as well as 10sqm. on plan) including disposal of excavated earth, lead up to 50m and lift up to 1.5m disposed earth to be leveled and neatly dressed : All kind of soil.	4,857.50	Cum	143.00	694,622.15
3	21.36	Filling available excavated earth (excluding rocks) in trenches, plinth, sides of foundation etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering lead up to 50m and lift up to 1.5m.	860.09	cum	85.00	73,107.93
4	21.38	Dry stone pitching 22.5 cm thick including supply of stones and preparing surface complete.	456.00	Cum	945.00	430,918.82
5	24.01	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering : All works up to plinth level : M10	278.05	cum	4,257.00	1,183,678.94

6	5.33.1 & 5.34.1 CPWD-16	Providing and laying in position ready mixed M-30 grade concrete for reinforced cement concrete work, using cement content as per approved design mix, manufactured in fully automatic batching plant and transported to site of work in transit mixer for all leads having continuous agitated mixer, manufactured as per mix design of specified grade for reinforced cement concrete work including pumping of R.M.C. from transit mixer to site of laying , excluding the cost of centering, shuttering finishing and reinforcement including cost of admixtures in recommended proportions as per IS : 9103 to accelerate/ retard setting of concrete, improve workability without impairing strength and durability as per direction of the Engineer - in - charge. (Note :- Cement content considered in this item is @ 330 kg/cum. Excess/less cement used as per design mix is payable/recoverable separately). All works upto plinth level.	1,246.99	cum	7,319.55	9,127,375.50
7	32.08	20 mm cement plaster with mix:1:3 (1cement:3 fine sand)	8,253.33	sqm	392.00	3,235,305.60
8	32.21	Neat cement punning	8,253.33	sqm	69.00	569,479.81
9	5.9.2 CPWD-16	Centering and shuttering including strutting, propping etc. and removal of form for : Walls (any thickness) including attached pilasters, buttresses, plinth and string courses etc.	3,667.00	sqm	378.60	1,388,327.71
10	5.9.3 CPWD-16	Centering and shuttering including strutting, propping etc. and removal of form for: Suspended floors, roofs, landings, balconies and access platform.	2,064.90	sqm	422.30	872,007.27
11	5.9.1 CPWD-16	Centering and shuttering including strutting, propping etc. and removal of form for: Foundation, Raft, PCC	150.01	Sq.m	193.95	29,093.82
12	5.9.5 CPWD-16	Centering and shuttering including strutting, propping etc. and removal of form for: Beams, Lintel Beams	541.08	Sq.m	342.90	185,536.33
13	5.9.6 CPWD-16	Centering and shuttering including strutting, propping etc. and removal of form for: Column	345.60	Sq.m	467.85	161,688.96

14	26.33	Reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding complete: Thermo-Mechanically Treated bars.	124,386.84	kilogram	63.99	7,960,011.54
15	19.19.1.1 CPWD- 16	Providing and fixing in position precast R.C.C. manhole cover and frame of required shape and approved quality : of size 600*450 mm	16.00	each	1,073.05	17,168.80
16	23.04	Steel work welded in built up sections/ framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer using structural steel etc. as required. In gratings, frames, guard bar, ladder, railings, brackets, gates and similar works	400.00	Kg	83.52	33,406.40
Note:- Above rate are excluding of GST					Total	26,008,999.98
MEP items						
17	Market Rate	Design, supply, installation, commissioning & testing with satisfactory test & trial of 3 phase fully Submersible Non Clog sewage lifting pumps for sewage transfer from sump well to sedimentation tank with pedestal base frame grouted in foundations. (2 Nos at Sumpwell , 1 No. extra in standby) Capacity- 416 cum/hr, Duty head - 15 Mtr, Moc-CI, B.H.P - 25 Anchor fastener for mounting rain cap pressure gauge-feeding / AKAI (ISI or DJB approved)	3.00	Nos	725,345.00	2,176,035.00
18	Market Rate	Providing, fixing, testing & commissioning of blower for MBBR tank and poly dosing system for sludge handling with pipe and valve arrangements. (1working + 1 standby) Blower Capacity – 5692m3/hr@4500mmwc HP – 71, MoC – CI, Make – Everest/Equi.	2.00	Nos	2,200,000.00	4,400,000.00
19	Market Rate	Providing, fixing, testing & commissioning of Air Diffusors of following specification Size-63mmODx2000mm length,MoC- Silicon, Make- Sadan-cogen/ Vibro Retrievable type	1,149.00	Nos	14,350.00	16,488,150.00

20	Market Rate	<p>Primary Clarifier Mechanism with Suitable for mounting on RCC Tank of size 19 mt. Dia.x 2.5 mt.SWD+0.3MT.FB</p> <p>Access Bridge :- M.S. Fabricated with full walkway with 1000 mm width & length is 19 mtr. Chequered plate walkway of 5 mm thick and hand railings made of 32 / 25 NB 'B' class pipes of 1.00 meter high from one end of the bridge to the drive center and a meter beyond</p> <p>Drive:- Central driven by worm & worm wheel through chain & Sprocket connected to motor, RPM of central Scrapper is 4-5 RPH, Couple with gear box.</p> <p>Motor:- 5Hp , 4 pole,3 ph,440 volts AC, Make- Crompton/ Equivalent, Type- Foot Mounted</p> <p>Gear Box:- Radicon/Equiv, Input PRM-1440.</p> <p>Central Shaft:- M.S. epoxy painted central shaft of heavy pipe construction ,coupled with drive housing.</p> <p>Scrappers:-M.S. Epoxy painted scrapper arms of structural frame work with blades to sweep the tank bottom twice per revolution. MoC- MSEP, Material 50x50x5 mm Angle Frame, with ISMC Support .Scrapper provided with neoprene rubber squeezes to collect the sludge at the center point. Clarifier rake arms, two nos., made of channels and suitably braced with MS angles, duly welded with blades, made of 5 mm plates, 760 mm long , will be positioned on either side of the vertical shaft.</p> <p>Scum Scraping Mechanism:- MoC- MSEP. , Size:- 0.3mx 9.25 m, Material :- MS Palte 6 mm thickness with 50x50x5 mm angle</p> <p>Feed Well:- M.S. Fabricated , Supported from the bridge Dia:-3M. & Height 2 mtr, Material: - MS Plate 6 mm Thickness , with 50x50x5mm thickness Angle. Painting:- All wetted parts will be painted with 2 coats of enamel paint.</p> <p>Weir plates along with fixing bolts :- Size :- 21.5M Dia , & 0.4m Height, MoC- MSEP, Plate thickness 6 mm</p>	1.00	Nos	2,350,000.00	2,350,000.00
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21		Providing, fixing, testing & commissioning of Sludge recycle pumps pumps Make:- Kirloskar, Capacity- 20-30m ³ /hr@15mtr head, Type- Mono block Mud Pump , Hp-1	2.00	Nos	67,350.00	134,700.00
22	Market Rate	Providing, fixing, testing & commissioning of Decanter feed pumps Make:- Kirloskar, Capacity- 20-30m ³ /hr@15mtr head, Type- Mono block Mud Pump , Hp-1	2.00	Nos	67,350.00	134,700.00
23	Market Rate	Supply & installation of Decanter for sludge thickening (As per specifications attached as annexure)	1.00	Nos	2,300,000.00	2,300,000.00
24	Market Rate	Providing, fixing, testing & commissioning of Poly dosing system for Decanter Dosing Tank-2000 Ltr, MoC- HDPE, Make- Sintex, Qty-1 Nos., Dosing Pump-0-100 lph, Make- Milton Roy, MoC-PP,Qty- 2 Nos	1.00	Nos	450,000.00	450,000.00
25	Market Rate	Providing and setting up Ozonator of capacity 2375gm/hr of O ₂ .	1.00	Nos	4,600,000.00	4,600,000.00
26	Market Rate	Starter Panel For detailed specifications please refer Annexure (Detailed specification of Starter Panel) 8 Nos of DOL starters	8.00	Nos	26,758.75	214,070.03
27	Market Rate	Supply and installation of Cabling in conduit includes POLYCAB / INDOCAB cables & 4 core for Sump Pump 4mm ² Al Armoured)	200.00	Mtr	401.38	80,276.26
28	Market Rate	Supplying and laying 25 mm X 5 mm GI strip at 0.50 meter below ground as strip earth electrode, including connection/ terminating with nut, bolt, spring, washer etc. as required. (Jointing shall be done by overlapping and with 2 sets of brass nut bolt & spring washer spaced at 50mm)	200.00	Mtr	2,087.18	417,436.55
29	Market Rate	Providing & fixing on line Flange type Ultrasonic Flow meter for Monitoring the total flow, Flow rate. etc. Including electrical wiring from panel to flow meter. Complete with all type of Plumbing & Electrical connections, accessories, wiring, conduits & supports complete with all respect.(Inlet To STP & Treated water Line) - Size - 600mm dia	2.00	Nos	1,135,000.00	2270000

30	18.27.11	Providing and fixing all unit interconnection piping of following sizes /as per drawing, Size - 600	150.00	Rmt	16,722.75	2,508,412.50
31	18.27.7	Providing and fixing all piping required for pumps of following sizes /as per drawing, Size - 350	50.00	Rmt	6,472.60	323,630.00
32	Market Rate	Providing and fixing flow control valves of required size for pipe fittings , Size – 600, MoC – UPVC,	10.00	Nos	75,625.00	756,250.00
33	Market Rate	Providing and fixing butterfly valves of required size for pump fittings Size - 350, MoC -Upvc	6.00	Nos	45,600.00	273,600.00
34	Market Rate	Non return valves for pumps Size - 350mm, MoC - Upvc	4.00	Nos	68,350.00	273,400.00
35	18.17.6	Providing and fixing C.I. gate valves complete with bolts, nuts, rubber insertions etc. (the tail pieces if required will be paid separately) :of 80 mm size	2.00	Nos	2,217.90	4,435.80
36	Market Rate	MS-Portable cabins of size 10'x10'x8'6"	1.00	Nos	147,173.14	147,173.14
		Total MEP				40,302,269.28
		O&M cost for 5 years				
37	O&M sheet	Operation and Maintenance of for 1 year. Payment shall be released quarterly. Duties during O&M: plant to be run 24/7. Adequate security and operators to be provided for proper plant operation. Treated water quality target should be monitored by PMC (random sampling). Equipment's maintenance and repair, replacement and maintenance of plants shall be the responsibility of contractor. Electricity charges shall be paid as per actual usage on producing the bills.	5.00	Years	41,963,192.47	41,963,192.47
		Total of MEP and O&M				41,963,192.47
38		Providing detailed hydraulic, P&ID & line drawings & RCC drawings and its approval from competitive agency	1.00	Job	500,000.00	500,000.00
		Grand total Civil, MEP, O&M				108,774,461.73
39		3rd Party supervision as PMC				2,175,489.23
		Total cost of project				110,949,950.97
NOTE: The item rates and cost are used only for reference and are subjected to vary based on market situations and timely updates in DSR.						

Work Name- 1 MLD SBR BOQ For Civil & MEP						
Sr. No.	Maharashtra PWD SSR Item No.	Description	Qty.	Units	Rate As per PWD 18-19 (Excluding GST)	Amount
1	21.33	Clearing jungle including uprooting of rank vegetation, grass, brush wood, trees and saplings of girth upto 30 cm measured at a height of 1 m above ground level and removal of rubbish upto a distance of 50 m outside the periphery of the area cleared.	2,523.56	Sq.m	8.00	20,188.48
2	21..02	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means over areas (exceeding 30cm. in depth, 1.5m in width as well as 10sqm. on plan) including disposal of excavated earth, lead up to 50m and lift up to 1.5m disposed earth to be leveled and neatly dressed : All kind of soil.	1,338.54	Cum	143.00	191,411.22
3	21.36	Filling available excavated earth (excluding rocks) in trenches, plinth, sides of foundation etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering lead up to 50m and lift up to 1.5m.	448.87	cum	85.00	38,153.61
4	21.38	Dry stone pitching 22.5 cm thick including supply of stones and preparing surface complete.	90.32	Cum	945.00	85,350.51
5	24.01	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering : All works up to plinth level : M10	49.01	cum	4,257.00	208,644.08

6	5.33.1 & 5.34.1 CPWD-16	Providing and laying in position ready mixed M-30 grade concrete for reinforced cement concrete work, using cement content as per approved design mix, manufactured in fully automatic batching plant and transported to site of work in transit mixer for all leads having continuous agitated mixer, manufactured as per mix design of specified grade for reinforced cement concrete work including pumping of R.M.C. from transit mixer to site of laying , excluding the cost of centering, shuttering finishing and reinforcement including cost of admixtures in recommended proportions as per IS : 9103 to accelerate/ retard setting of concrete, improve workability without impairing strength and durability as per direction of the Engineer - in - charge. (Note :- Cement content considered in this item is @ 330 kg/cum. Excess/less cement used as per design mix is payable/recoverable separately). All works upto plinth level.	344.48	cum	7,319.55	2,521,445.90
7	32.08	20 mm cement plaster with mix:1:3 (1cement:3 fine sand)	1,477.20	sqm	392.00	579,062.40
8	32.21	Neat cement punning	1,477.20	sqm	69.00	101,926.80
9	5.9.2 CPWD-16	Centering and shuttering including strutting, propping etc. and removal of form for : Walls (any thickness) including attached pilasters, buttresses, plinth and string courses etc.	744.60	sqm	378.60	281,905.56
10	5.9.3 CPWD-16	Centering and shuttering including strutting, propping etc. and removal of form for: Suspended floors, roofs, landings, balconies and access platform.	354.93	sqm	422.30	149,886.94
11	5.9.1 CPWD-16	Centering and shuttering including strutting, propping etc. and removal of form for: Foundation, Raft, PCC	96.98	Sq.m	193.95	18,809.27
12	5.9.5 CPWD-16	Centering and shuttering including strutting, propping etc. and removal of form for: Beams, Lintel Beams	198.18	Sq.m	342.90	67,955.92
13	5.9.6 CPWD-16	Centering and shuttering including strutting, propping etc. and removal of form for: Column	272.64	Sq.m	467.85	127,554.62

14	26.33	Reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding complete: Thermo-Mechanically Treated bars.	34,361.98	kilogram	63.99	2,198,960.53
15	19.19.1.1 CPWD-16	Providing and fixing in position precast R.C.C. manhole cover and frame of required shape and approved quality : of size 600*450 mm	16.00	each	1,073.05	17,168.80
16	23.04	Steel work welded in built up sections/ framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer using structural steel etc. as required. In gratings, frames, guard bar, ladder, railings, brackets, gates and similar works	400.00	Kg	83.52	33,406.40
Note:- Above rate are excluding of GST					Total	6,641,831.06
MEP items						
17	Market Rate	Design, supply, installation, commissioning & testing with satisfactory test & trial of 3 phase fully Submersible Non Clog sewage lifting pumps for sewage transfer from collection sump to tube settler tank with pedestal base frame grouted in foundations. (2 Nos at collection tank , 1 No. extra in standby) Capacity- 41.5 cum/hr Duty head - 15 Mtr Moc-CI B.H.P - 5 Anchor fastener for mounting rain cap pressure gauge-feeding / AKAI (ISI or DJB approved)	3.00	Nos	227,449.40	682,348.21
18	Market Rate	Providing, fixing, testing & commissioning of blower for SBR tank and poly dosing system for sludge handling with pipe and valve arrangements. (1working + 1 standby) Blower Capacity – 569m3/hr@4500mmwc HP – 9 MoC - CI Make – Everest/Equi.	2.00	Nos	950,000.00	1,900,000.00

19	Market Rate	Providing, fixing, testing & commissioning of Air Diffusors of following specification Size-63mmODx2000mm length,MoC- Silicon, Make- Sadan-cogen/ Vibro Retrievable type	114.00	Nos	14,350.00	1,635,900.00
20	Market Rate	Water Decant assembly for SBR and automation	1.00	JoB	18,500,000.00	18,500,000.00
21	Market Rate	Providing, fixing, testing & commissioning of Filter press feed pumps Make:- Kirloskar, Capacity-5-10m3/hr@15mtr head, Type- Mono block Mud Pump , Hp-1	2.00	Nos	46,827.82	93,655.64
22	Market Rate	Providing, fixing, testing & commissioning of FILTER PRESS 1200MM X 1200MM X 60 chambers PP recess plate type with lock nut type hydraulic closing device with one set filter cloth	1.00	Nos	600,000.00	600,000.00
23	Market Rate	Providing, fixing, testing & commissioning of Poly dosing system for Filter press Dosing Tank-500 Ltr, MoC- HDPE, Make- Sintex, Qty-1 Nos., Dosing Pump-0-30 lph, Make- Milton Roy, MoC- PP,Qty- 2 Nos	1.00	Nos	295,000.00	295,000.00
24	Market Rate	Providing and setting up Hypo-Chloride Dozing System(HDPE make) of tank capacity 500ltr with dozing pump of capacity 0-10 lph in two numbers with agitator of any make ISI approved.	1.00	Nos	80,276.26	80,276.26
25	Market Rate	Starter Panel For detailed specifications please refer Annexure (Detailed specification of Starter Panel) 8 Nos of DOL starters	8.00	Nos	26,758.75	214,070.03
26	Market Rate	Supply and installation of Cabling in conduit includes POLYCAB / INDOCAB cables & 4 core for Sump Pump 4mm ² Al Armoured)	50.00	Mtr	401.38	20,069.06
27	Market Rate	Supplying and laying 25 mm X 5 mm GI strip at 0.50 meter below ground as strip earth electrode, including connection/ terminating with nut, bolt, spring, washer etc. as required. (Jointing shall be done by overlapping and with 2 sets of brass nut bolt & spring washer spaced at 50mm)	50.00	Mtr	2,087.18	104,359.14

28	Market Rate	Providing & fixing on line Electromagnetic type flow meter cum Totaliser for Monitoring the total flow, Flow rate. etc. Including electrical wiring from panel to flow meter. Complete with all type of Plumbing & Electrical connections, accessories, wiring, conduits & supports complete with all respect. The signal from read out shall be 4-20 m.amps to be received on BAS. (Inlet To STP & Treated water Line of size 250mm)	2.00	Nos	200,690.65	401,381.30
29	18.27.5	Providing and fixing all unit interconnection piping of following sizes /as per drawing Size - 250	50.00	Rmt	4,002.00	200,100.00
30	18.27.1	Providing and fixing all piping required for pumps of following sizes /as per drawing Size - 100	25.00	Rmt	1,201.95	30,048.75
31	Market Rate	Providing and fixing flow control valves of required size for pipe fittings Size - 250 MoC - UPVC	10.00	Nos	25,000.00	250,000.00
32	Market Rate	Providing and fixing butterfly valves of required size for pump fittings Size - 100, MoC -Upvc	6.00	Nos	15,000.00	90,000.00
33	Market Rate	Non return valves for pumps Size - 100mm, MoC - Upvc	4.00	Nos	20,000.00	80,000.00
31	18.17.6	Providing and fixing C.I. gate valves complete with bolts, nuts, rubber insertions etc. (the tail pieces if required will be paid separately) :of 80 mm size	2.00	Nos	2,217.90	4,435.80
32	Market Rate	MS-Portable cabins of size 10'x10'x8'6"	1.00	Nos	147,173.14	147,173.14
Total MEP						25,328,817.32
O&M cost for 5 years						

33	O&M sheet	Operation and Maintenance of for 1 year. Payment shall be released quarterly. Duties during O&M: plant to be run 24/7. Adequate security and operators to be provided for proper plant operation. Treated water quality target should be monitored by PMC (random sampling). Equipment's maintenance and repair, replacement and maintenance of plants shall be the responsibility of contractor. Electricity charges shall be paid as per actual usage on producing the bills.	5.00	Years	23,458,117.35	23,458,117.35
Total O&M						23,458,117.35
34		Providing detailed hydraulic, P&ID & line drawings & RCC drawings and its approval from competitive agency	1.00	Job	500,000.00	500,000.00
Grand total Civil, MEP, O&M, Drawings						55,928,765.73
35		3rd Party supervision as PMC				1,118,575.31
Total cost of project						57,047,341.04
NOTE: The item rates and cost are used only for reference and are subjected to vary based on market situations and timely updates in DSR.						

Work Name- 5 MLD SBR BOQ For Civil & MEP						
Sr. No.	Maharashtra PWD SSR Item No.	Description	Qty.	Units	Rate As per PWD 18-19 (Excluding GST)	Amount
1	21.33	Clearing jungle including uprooting of rank vegetation, grass, brush wood, trees and saplings of girth upto 30 cm measured at a height of 1 m above ground level and removal of rubbish upto a distance of 50 m outside the periphery of the area cleared.	5,404.36	Sq.m	8.00	43,234.88
2	21..02	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means over areas (exceeding 30cm. in depth, 1.5m in width as well as 10sqm. on plan) including disposal of excavated earth, lead up to 50m and lift up to 1.5m disposed earth to be leveled and neatly dressed : All kind of soil.	4,384.63	Cum	143.00	627,002.38
3	21.36	Filling available excavated earth (excluding rocks) in trenches, plinth, sides of foundation etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering lead up to 50m and lift up to 1.5m.	803.15	cum	85.00	68,267.41
4	21.38	Dry stone pitching 22.5 cm thick including supply of stones and preparing surface complete.	270.92	Cum	945.00	256,023.18
5	24.01	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering : All works up to plinth level : M10	161.42	cum	4,257.00	687,147.91

6	5.33.1 & 5.34.1 CPWD-16	Providing and laying in position ready mixed M-30 grade concrete for reinforced cement concrete work, using cement content as per approved design mix, manufactured in fully automatic batching plant and transported to site of work in transit mixer for all leads having continuous agitated mixer, manufactured as per mix design of specified grade for reinforced cement concrete work including pumping of R.M.C. from transit mixer to site of laying , excluding the cost of centering, shuttering finishing and reinforcement including cost of admixtures in recommended proportions as per IS : 9103 to accelerate/ retard setting of concrete, improve workability without impairing strength and durability as per direction of the Engineer - in - charge. (Note :- Cement content considered in this item is @ 330 kg/cum. Excess/less cement used as per design mix is payable/recoverable separately). All works upto plinth level.	701.75	cum	7,319.55	5,136,457.61
7	32.08	20 mm cement plaster with mix:1:3 (1cement:3 fine sand)	3,955.14	sqm	392.00	1,550,414.88
8	32.21	Neat cement punning	3,955.14	sqm	69.00	272,904.66
9	5.9.2 CPWD-16	Centering and shuttering including strutting, propping etc. and removal of form for : Walls (any thickness) including attached pilasters, buttresses, plinth and string courses etc.	1,256.48	sqm	378.60	475,703.33
10	5.9.3 CPWD-16	Centering and shuttering including strutting, propping etc. and removal of form for: Suspended floors, roofs, landings, balconies and access platform.	1,326.29	sqm	422.30	560,092.27
11	5.9.1 CPWD-16	Centering and shuttering including strutting, propping etc. and removal of form for: Foundation, Raft, PCC	144.16	Sq.m	193.95	27,959.83
12	5.9.5 CPWD-16	Centering and shuttering including strutting, propping etc. and removal of form for: Beams, Lintel Beams	307.62	Sq.m	342.90	105,482.90
13	5.9.6 CPWD-16	Centering and shuttering including strutting, propping etc. and removal of form for: Column	291.84	Sq.m	467.85	136,537.34

14	26.33	Reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding complete: Thermo-Mechanically Treated bars.	69,999.06	kilogram	63.99	4,479,520.09
15	19.19.1.1 CPWD-16	Providing and fixing in position precast R.C.C. manhole cover and frame of required shape and approved quality : of size 600*450 mm	16.00	each	1,073.05	17,168.80
16	23.04	Steel work welded in built up sections/ framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer using structural steel etc. as required. In gratings, frames, guard bar, ladder, railings, brackets, gates and similar works	400.00	Kg	83.52	33,406.40
Note:- Above rate are excluding of GST					Total	14,477,323.87
MEP items						
17	Market Rate	Design, supply, installation, commissioning & testing with satisfactory test & trial of 3 phase fully Submersible Non Clog sewage lifting pumps for sewage transfer from sump well to sedimentation tank with pedestal base frame grouted in foundations. (2 Nos at collection tank , 1 No. extra in standby) Capacity- 208 cum/hr Duty head - 15 Mtr Moc-CI B.H.P - 15 Anchor fastener for mounting rain cap pressure gauge-feeding / AKAI (ISI or DJB approved)	3.00	Nos	450,000.00	1,350,000.00
18	Market Rate	Providing, fixing, testing & commissioning of blower for SBR tank and poly dosing system for sludge handling with pipe and valve arrangements. (1working + 1 standby) Blower Capacity – 2846m3/hr@4500mmwc HP – 41.7 MoC - CI Make – Everest/Equi.	2.00	Nos	1,350,000.00	2,700,000.00

19	Market Rate	Providing, fixing, testing & commissioning of Air Diffusors of following specification Size-63mmODx2000mm length, MoC- Silicon, Make- Sadan-cogen/ Vibro Retrievable type	570.00	Nos	14,350.00	8,179,500.00
20	Market Rate	Water Decant assembly for SBR & automation	1.00	Nos	22,000,000.00	22,000,000.00
21	Market Rate	Providing, fixing, testing & commissioning of Decanter feed pumps Make:- Kirloskar, Capacity-10-20m3/hr@15mtr head, Type- Mono block Mud Pump , Hp-1	2.00	Nos	46,827.82	93,655.64
22	Market Rate	Supply & installation of Decanter for sludge thickening (As per specifications attached as annexure)	1.00	Nos	1,950,000.00	1,950,000.00
23	Market Rate	Providing, fixing, testing & commissioning of Poly dosing system for Decanter Dosing Tank-1000 Ltr, MoC- HDPE, Make- Sintex, Qty-1 Nos., Dosing Pump-0-50 lph, Make- Milton Roy, MoC- PP,Qty- 2 Nos	1.00	Nos	375,000.00	375,000.00
24	Market Rate	Providing and setting up Ozonator of capacity 875gm/hr of O2.	1.00	Nos	2,000,000.00	2,000,000.00
25	Market Rate	Starter Panel For detailed specifications please refer Annexure (Detailed specification of Starter Panel) 8 Nos of DOL starters	8.00	Nos	26,758.75	214,070.03
26	Market Rate	Supply and installation of Cabling in conduit includes POLYCAB / INDOCAB cables & 4 core for Sump Pump 4mm2 Al Armoured)	150.00	Mtr	401.38	60,207.19
27	Market Rate	Supplying and laying 25 mm X 5 mm GI strip at 0.50 meter below ground as strip earth electrode, including connection/ terminating with nut, bolt, spring, washer etc. as required. (Jointing shall be done by overlapping and with 2 sets of brass nut bolt & spring washer spaced at 50mm)	150.00	Mtr	2,087.18	313,077.41

28	Market Rate	Providing & fixing on line Flange type Ultrasonic Flow meter for Monitoring the total flow, Flow rate. etc. Including electrical wiring from panel to flow meter. Complete with all type of Plumbing & Electrical connections, accessories, wiring, conduits & supports complete with all respect.(Inlet To STP & Treated water Line) - Size - 500mm dia	2.00	Nos	735,000.00	1,470,000.00
29	18.27.9	Providing and fixing all unit interconnection piping of following sizes /as per drawing Size - 500	150.00	Rmt	11,969.15	1,795,372.50
30	18.27.5	Providing and fixing all piping required for pumps of following sizes /as per drawing Size - 250	50.00	Rmt	4,002.00	200,100.00
31	Market Rate	Providing and fixing flow control valves of required size for pipe fittings Size - 500 MoC - UPVC	10.00	Nos	45,524.00	455,240.00
32	Market Rate	Providing and fixing butterfly valves of required size for pump fittings Size - 250, MoC -Upvc	6.00	Nos	27,530.00	165,180.00
33	Market Rate	Non return valves for pumps Size - 250mm, MoC - Upvc	4.00	Nos	39,485.00	157,940.00
34	18.17.6	Providing and fixing C.I. gate valves complete with bolts, nuts, rubber insertions etc. (the tail pieces if required will be paid separately) : of 80 mm size	2.00	Nos	2,217.90	4,435.80
35	Market Rate	MS-Portable cabins of size 10'x10'x8'6"	1.00	Nos	147,173.14	147,173.14
		Total MEP				43,630,951.71
		O&M cost for 5 years				
36	O&M sheet	Operation and Maintenance of for 1 year. Payment shall be released quarterly. Duties during O&M: plant to be run 24/7. Adequate security and operators to be provided for proper plant operation. Treated water quality target should be monitored by PMC (random sampling). Equipment's maintenance and repair, replacement and maintenance of plants shall be the responsibility of contractor. Electricity charges shall be paid as per actual usage on producing the bills.	5.00	Years	33,704,993.58	33,704,993.58

Total O&M						33,704,993.58
37		Providing detailed hydraulic, P&ID & line drawings & RCC drawings and its approval from competitive agency	1.00	Job	500,000.00	500,000.00
Grand total Civil, MEP, O&M						92,313,269.16
38		3rd Party supervision as PMC				1,846,265.38
Total cost of project						94,159,534.54
NOTE: The item rates and cost are used only for reference and are subjected to vary based on market situations and timely updates in DSR.						

Work Name- 10 MLD SBR BOQ For Civil & MEP						
Sr. No.	Maharashtra PWD SSR Item No.	Description	Qty.	Units	Rate As per PWD 18-19 (Excluding GST)	Amount
1	21.33	Clearing jungle including uprooting of rank vegetation, grass, brush wood, trees and saplings of girth upto 30 cm measured at a height of 1 m above ground level and removal of rubbish upto a distance of 50 m outside the periphery of the area cleared.	4,680.00	Sq.m	8.00	37,440.00
2	21..02	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means over areas (exceeding 30cm. in depth, 1.5m in width as well as 10sqm. on plan) including disposal of excavated earth, lead up to 50m and lift up to 1.5m disposed earth to be leveled and neatly dressed : All kind of soil.	4,432.78	Cum	143.00	633,887.25
3	21.36	Filling available excavated earth (excluding rocks) in trenches, plinth, sides of foundation etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering lead up to 50m and lift up to 1.5m.	828.16	cum	85.00	70,393.56
4	21.38	Dry stone pitching 22.5 cm thick including supply of stones and preparing surface complete.	319.75	Cum	945.00	302,161.74
5	24.01	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering : All works up to plinth level : M10	190.77	cum	4,257.00	812,103.63

6	5.33.1 & 5.34.1 CPWD-16	Providing and laying in position ready mixed M-30 grade concrete for reinforced cement concrete work, using cement content as per approved design mix, manufactured in fully automatic batching plant and transported to site of work in transit mixer for all leads having continuous agitated mixer, manufactured as per mix design of specified grade for reinforced cement concrete work including pumping of R.M.C. from transit mixer to site of laying , excluding the cost of centering, shuttering finishing and reinforcement including cost of admixtures in recommended proportions as per IS : 9103 to accelerate/ retard setting of concrete, improve workability without impairing strength and durability as per direction of the Engineer - in - charge. (Note :- Cement content considered in this item is @ 330 kg/cum. Excess/less cement used as per design mix is payable/recoverable separately). All works upto plinth level.	929.26	cum	7,319.55	6,801,790.80
7	32.08	20 mm cement plaster with mix:1:3 (1cement:3 fine sand)	5,888.80	sqm	392.00	2,308,409.60
8	32.21	Neat cement punning	5,888.80	sqm	69.00	406,327.20
9	5.9.2 CPWD-16	Centering and shuttering including strutting, propping etc. and removal of form for : Walls (any thickness) including attached pilasters, buttresses, plinth and string courses etc.	1,597.82	sqm	378.60	604,934.65
10	5.9.3 CPWD-16	Centering and shuttering including strutting, propping etc. and removal of form for: Suspended floors, roofs, landings, balconies and access platform.	2,117.70	sqm	422.30	894,304.71
11	5.9.1 CPWD-16	Centering and shuttering including strutting, propping etc. and removal of form for: Foundation, Raft, PCC	135.81	Sq.m	193.95	26,341.13
12	5.9.5 CPWD-16	Centering and shuttering including strutting, propping etc. and removal of form for: Beams, Lintel Beams	430.38	Sq.m	342.90	147,577.30
13	5.9.6 CPWD-16	Centering and shuttering including strutting, propping etc. and removal of form for: Column	249.60	Sq.m	467.85	116,775.36

14	26.33	Reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding complete: Thermo-Mechanically Treated bars.	92,694.04	kilogram	63.99	5,931,862.15
15	19.19.1.1 CPWD-16	Providing and fixing in position precast R.C.C. manhole cover and frame of required shape and approved quality : of size 600*450 mm	16.00	each	1,073.05	17,168.80
16	23.04	Steel work welded in built up sections/ framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer using structural steel etc. as required. In gratings, frames, guard bar, ladder, railings, brackets, gates and similar works	400.00	Kg	83.52	33,406.40
Note:- Above rate are excluding of GST					Total	19,144,884.28
MEP items						
17	Market Rate	Design, supply, installation, commissioning & testing with satisfactory test & trial of 3 phase fully Submersible Non Clog sewage lifting pumps for sewage transfer from sump well to sedimentation tank with pedestal base frame grouted in foundations. (2 Nos at Sumpwell , 1 No. extra in standby) Capacity- 416 cum/hr Duty head - 15 Mtr Moc-CI B.H.P - 25 Anchor fastener for mounting rain cap pressure gauge-feeding / AKAI (ISI or DJB approved)	3.00	Nos	725,345.00	2,176,035.00
18	Market Rate	Providing, fixing, testing & commissioning of blower for SBR tank and poly dosing system for sludge handling with pipe and valve arrangements. (1working + 1 standby) Blower Capacity – 5692m ³ /hr@4500mmwc HP – 71 MoC - CI Make – Everest/Equi.	2.00	Nos	2,200,000.00	4,400,000.00

19	Market Rate	Providing, fixing, testing & commissioning of Air Diffusors of following specification Size-63mmODx2000mm length, MoC- Silicon, Make- Sadan-cogen/ Vibro Retrievable type	1,149.00	Nos	14,350.00	16,488,150.00
20	Market Rate	Water Decant assembly for SBR & automation	1.00	Nos	27,500,000.00	27,500,000.00
21	Market Rate	Providing, fixing, testing & commissioning of Decanter feed pumps Make:- Kirloskar, Capacity- 20-30m ³ /hr@15mtr head, Type- Mono block Mud Pump , Hp-1	2.00	Nos	67,350.00	134,700.00
22	Market Rate	Supply & installation of Decanter for sludge thickening (As per specifications attached as annexure)	1.00	Nos	2,300,000.00	2,300,000.00
23	Market Rate	Providing, fixing, testing & commissioning of Poly dosing system for Decanter Dosing Tank-2000 Ltr, MoC- HDPE, Make- Sintex, Qty-1 Nos., Dosing Pump-0-100 lph, Make- Milton Roy, MoC-PP, Qty- 2 Nos	1.00	Nos	450,000.00	450,000.00
24	Market Rate	Providing and setting up Ozonator of capacity 2375gm/hr of O ₂ .	1.00	Nos	4,600,000.00	4,600,000.00
25	Market Rate	Starter Panel For detailed specifications please refer Annexure (Detailed specification of Starter Panel) 8 Nos of DOL starters	8.00	Nos	26,758.75	214,070.03
26	Market Rate	Supply and installation of Cabling in conduit includes POLYCAB / INDOCAB cables & 4 core for Sump Pump 4mm ² Al Armoured)	200.00	Mtr	401.38	80,276.26
27	Market Rate	Supplying and laying 25 mm X 5 mm GI strip at 0.50 meter below ground as strip earth electrode, including connection/ terminating with nut, bolt, spring, washer etc. as required. (Jointing shall be done by overlapping and with 2 sets of brass nut bolt & spring washer spaced at 50mm)	200.00	Mtr	2,087.18	417,436.55

28	Market Rate	Providing & fixing on line Flange type Ultrasonic Flow meter for Monitoring the total flow, Flow rate. etc. Including electrical wiring from panel to flow meter. Complete with all type of Plumbing & Electrical connections, accessories, wiring, conduits & supports complete with all respect.(Inlet To STP & Treated water Line) - Size - 600mm dia.	2.00	Nos	1,135,000.00	2270000
	18.27.11	Providing and fixing all unit interconnection piping of following sizes /as per drawing Size – 600	150.00	Rmt	16,722.75	2,508,412.50
	18.27.7	Providing and fixing all piping required for pumps of following sizes /as per drawing Size – 350	50.00	Rmt	6,472.60	323,630.00
	Market Rate	Providing and fixing flow control valves of required size for pipe fittings Size - 600 MoC – UPVC	10.00	Nos	75,625.00	756,250.00
29	Market Rate	Providing and fixing butterfly valves of required size for pump fittings Size - 350, MoC -Upvc	6.00	Nos	45,600.00	273,600.00
30	Market Rate	Non return valves for pumps Size - 350mm, MoC – Upvc	4.00	Nos	68,350.00	273,400.00
31	18.17.6	Providing and fixing C.I. gate valves complete with bolts, nuts, rubber insertions etc. (the tail pieces if required will be paid separately) :of 80 mm size	2.00	Nos	2,217.90	4,435.80
32	Market Rate	MS-Portable cabins of size 10'x10'x8'6"	1.00	Nos	147,173.14	147,173.14
		Total MEP				65,317,569.28
		O&M cost for 5 years				
33	O&M sheet	Operation and Maintenance of for 1 year. Payment shall be released quarterly. Duties during O&M: plant to be run 24/7. Adequate security and operators to be provided for proper plant operation. Treated water quality target should be monitored by PMC (random sampling). Equipment's maintenance and repair, replacement and maintenance of plants shall be the responsibility of contractor. Electricity charges shall be paid as per actual usage on producing the bills.	5.00	Years	45,626,091.67	45,626,091.67

Total of MEP and O&M						45,626,091.67
34		Providing detailed hydraulic, P&ID & line drawings & RCC drawings and its approval from competitive agency	1.00	Job	500,000.00	500,000.00
Grand total Civil, MEP, O&M						130,588,545.23
35		3rd Party supervision as PMC				2,611,770.90
Total cost of project						133,200,316.14
NOTE: The item rates and cost are used only for reference and are subjected to vary based on market situations and timely updates in DSR.						