

VOLUME - II

Price Bid Format Ref. No.
.: TOD1Q12112/PBF/01 Rev. 0

PRICE BID SPECIFICATION

PROJECT: E&C works for Mechanical & Electrical package for 1x4.5 MLD
Sewage Treatment Plant for BHEL Township, Barkhera, Bhopal, M.P.

BHARAT HEAVY ELECTRICALS LIMITED, PE&SD, R.C. PURAM, HYDERABAD - 502032

Price Bid Format (Vol.II of NIT)

Ref. No. TOD1Q12112/PBF/01 Rev. 0

Sh. 1 of 1

Abstract of Cost

PROJECT :: E&C works for Mechanical & Electrical package for 1x4.5 MLD Sewage Treatment Plant for BHEL Township, Barkhera, Bhopal, M.P.

Section No. (A)	Item Description (B)	Unit (C)	Quantity (D)	Weightage % (E)	Rate (Rs.) (F)	Amount (Rs.) (G)	Remarks (H)
1.0	ERECTION, TESTING COMMISSIONING AND PAINTING APPLICATION FOR EQUIPMENT	MT	29.235	19.67	Bidder need not fill any price here. This will be filled (populated) based on total quoted Price.	Bidder need not fill any price here. This will be filled (populated) based on total quoted Price.	As per SOQ(1.0) attached
2.0	FABRICATION, RADIOGRAPHY, ERECTION, TESTING COMMISSIONING AND PAINTING APPLICATION FOR PIPING	MT	66.410	67.02			As per SOQ(2.0) attached
3.0	Electrical and C&I	PACKAGE	1	5.64			As per SOQ(3.0) attached
4.0	Material Handling	MT	105.000	2.52			As per SOQ(4.0) attached
5.0	Supply of CPVC Pipes & Str steel	PACKAGE	1	5.15			As per SOQ(5.0) attached
		Total weightage in %=		100.00			
	Total in Figures						
	Total in words =						

Note:	
1	Bidders should quote only the (Total Amount) both in figures & words in the specified place. They should not fill/quote/write anything in col. (F) & (G). These rates & amount will be derived based on total quoted rates and corresponding weightage rates for individual line items shown in col. (E).
2	Bidder need not fill any value in amount column, unit prices shall be worked out from the total price as per the percentage given in each item.
3	Evaluation Shall be based on total amount quoted by bidder.
4	The rate and amount are inclusive of all applicable taxes, except for the GST. For details of taxes, clause no. 8.0 of the TCC will be applicable.

SCHEDULE OF QUANTITIES (1.0)

PROJECT ::E&C works for Mechanical & Electrical package for 1x4.5 MLD Sewage Treatment Plant for BHEL Township, Barkhera, Bhopal, M.P.

Section 1.0 ERECTION, TESTING COMMISSIONING AND PAINTING APPLICATION FOR EQUIPMENT					
Sl. No.	Description	Unit	Qty	Weight Each (kgs)	Total wt in (kgs)
1	Raw Sewage transfer pumps [submersible]	No.	3	150	450
2	Mechanical fine screen	No.	1	100	100
3	Manual fine screen	No.	1	100	100
4	Belt conveyor with motor	No.	1	25	25
5	Grit mechanism	lot	1	200	200
6	Air Blowers with motors	No.	3	750	2250
7	Return activated Sludge Pumps	No.	2	100	200
8	Surplus activated sludge/ waste activated sludge Pumps	No.	2	100	200
9	Decanter with components such as VFD, motor with gearbox, switches	No.	2	1500	1500
10	Diffusers	lot	1		
11	Air pipe grid with supports, hardware, etc.,	lot	1		
12	Hoist for air blower	No.	1	100	100
13	Air Blower for SBR-1&2	No.	3	1000	3000
14	Blower with motor for Sludge Sump	No.	1	500	500
15	Screw Sludge lifting Pums	No.	2	500	1000
16	NaOCl Dosing tank	No.	1	200	200
17	NaOCl Dosing pump	No.	1		
18	Centrifuge feed pump with motor	No.	2	500	1000
19	Centrifuge	No.	1	1500	1500
20	Poly electrolyte Dosing Pump	No.	1	200	200
21	Poly electrolyte Dosing Tank	No.	1		
22	Hoist for Centrifuge	No.	1	50	50
23	Motor Control Centre (MCC)	No.	1	6000	6000
24	PLC Panel	No.	1	300	300
25	Field instruments	lot	1	60	60
26	Field inst. Erection materials	lot	1	50	50
27	Base frame structure for PLC panels	lot	1	30	30
28	Control cable	lot	1	720	720
29	Instrument cable	km	3 [3 drums]	1500	4500
30	Cable Trays & structural steels	lot	1	5000	5000
	Total equipment weight (MT) =				29.235
Rate / MT (Rs. in figures & words)=					
Amount(in Rs. in figures & words) =					

SCHEDULE OF QUANTITIES (2.0)

PROJECT ::E&C works for Mechanical & Electrical package for 1x4.5 MLD Sewage Treatment Plant for BHEL Township, Barkhera, Bhopal, M.P.

Section 2.0: FABRICATION, RADIOGRAPHY, ERECTION, TESTING COMMISSIONING AND PAINTING APPLICATION FOR PIPING

Item No.	Item Description	Matl	Qty	Unit	Weight(Kg)	Remarks
1	6" DUCTILE IRON PIPE FLANGED	DI	33	mts	1455.3	FLANGED JOINT
2	6" DUCTILE IRON PIPE FLANGED	DI	33	mts	529.2	FLANGED JOINT
3	6" DUCTILE IRON PIPE FLANGED	DI	12	mts	352.8	FLANGED JOINT
4	6" DUCTILE IRON PIPE FLANGED	DI	8	mts	352.8	FLANGED JOINT
5	6" DUCTILE IRON PIPE FLANGED	DI	8	mts	1058.4	FLANGED JOINT
6	6" DUCTILE IRON PIPE FLANGED	DI	24	mts	970.2	FLANGED JOINT
7	6" DUCTILE IRON PIPE FLANGED	DI	22	mts	352.8	FLANGED JOINT
8	6" DUCTILE IRON PIPE FLANGED	DI	8	mts	441	FLANGED JOINT
9	6" DUCTILE IRON PIPE FLANGED	DI	10	mts	176.4	FLANGED JOINT
10	6" DUCTILE IRON MATERIAL FLANGED	DI	4	mts	485.1	FLANGED JOINT
11	6" DUCTILE IRON PIPE FLANGED	DI	11	mts	396.9	FLANGED JOINT
12	6" DUCTILE IRON PIPE FLANGED	DI	9	mts	88.2	FLANGED JOINT
13	6" DUCTILE IRON PIPE FLANGED	DI	2	mts	123.48	FLANGED JOINT
14	6" DUCTILE IRON PIPE FLANGED	DI	2.8	mts	142.884	FLANGED JOINT
15	10" DUCTILE IRON PIPE SPIGOT	DI	3.24	mts	15840	SPIGOT JOINT
16	4" DUCTILE IRON PIPE SPIGOT	DI	180	mts	2760	SPIGOT JOINT
17	3" DUCTILE IRON PIPE SPIGOT	DI	100	mts	2150	SPIGOT JOINT
18	24" DUCTILE IRON PIPE SPIGOT	DI	100	mts	7944	SPIGOT JOINT
19	6" DUCTILE IRON PIPE SPIGOT	DI	24	mts	5292	SPIGOT JOINT
20	3" DUCTILE IRON PIPE SPIGOT	DI	120	mts	1075	SPIGOT JOINT
21	6" 90 DEG ELBOW DUCTILE IRON FLANGED	DI	10	Nos	310	FLANGED JOINT
22	6" 90 DEG ELBOW DUCTILE IRON FLANGED	DI	10	Nos	310	FLANGED JOINT
23	6" DUCTILE IRON DOUBLE FLANGED TAPER	DI	3	Nos	132	FLANGED JOINT
24	10" DUCTILE IRON FLANGED SPIGOT	DI	3	Nos	159	SPIGOT JOINT
25	6" DUCTILE IRON FLANGED SPIGOT	DI	5	Nos	265	SPIGOT JOINT
26	6" DUCTILE IRON TEE SPIGOT	DI	4	Nos	408	SPIGOT JOINT
27	10" 90 DEG ELBOW DUCTILE IRON SPIGOT	DI	8	Nos	784	SPIGOT JOINT
28	10" 90 DEG ELBOW DUCTILE IRON FLANGED	DI	8	Nos	576	FLANGED JOINT
29	4" 90 DEG ELBOW DUCTILE IRON SPIGOT	DI	8	Nos	192	SPIGOT JOINT
30	3" DUCTILE IRON MATERIAL SPIGOT	DI	8	Nos	144	SPIGOT JOINT
31	4" EQ TEE DUCTILE IRON SPIGOT	DI	2	Nos	56	SPIGOT JOINT
32	24" EQ TEE DUCTILE IRON SPIGOT	DI	2	Nos	1204	SPIGOT JOINT
33	6" 90 DEG ELBOW DUCTILE IRON SPIGOT	DI	10	Nos	430	SPIGOT JOINT
34	VALVES DUCTILE IRON	DI	1	Lot	1500	FLANGED JOINT
35	8" MS PIPE 6.3MM THICKNESS	MS	100	mts	3310	WELDED
36	6" MS PIPE HVY THICKNESS	MS	100	mts	2200	WELDED
37	4" MS PIPE HVY THICKNESS	MS	50	mts	750	WELDED
38	1.5" MS PIPE HVY THICKNESS	MS	100	mts	450	WELDED
39	1" MS PIPE HVY THICKNESS	MS	300	mts	900	WELDED
40	8" MS ELBOW 6.3MM THICKNESS	MS	20	Nos	300	WELDED
41	6" MS ELBOW HEAVY THICKNESS	MS	20	Nos	200	WELDED
42	1.5" MS ELBOW HEAVY THICKNESS	MS	50	Nos	52.5	WELDED
43	8" MS TEE 6.3MM THICKNESS	MS	10	Nos	190	WELDED
44	6" MS MATERIAL HVY THICKNESS	MS	10	Nos	140	WELDED
45	1.5" MS TEE HVY THICKNESS	MS	10	Nos	12.8	WELDED
46	8" MS REDUCER	MS	15	Nos	100.05	WELDED
47	MISCELLANEOUS FITTINGS	MS	1	Lot	750	WELDED
48	Valves	MS	1	Lot	1500	WELDED
49	1/2" CPVC PIPE THICKNESS	CPVC	660	mts	133.98	ADHESIVE JOINT
50	1" CPVC PIPE THICKNESS	CPVC	165	mts	66.825	ADHESIVE JOINT
51	1.5" CPVC PIPE THICKNESS	CPVC	330	mts	223.41	ADHESIVE JOINT
52	CPVC FITTINGS	CPVC		Lot	375.785	ADHESIVE JOINT
53	Structural steel	MS	6000	kgs	6000	
54	Fabrication, welding and mounting of Hook -up items for Instruments	MS	300	kgs	300	
Total weight (In MT) =					66.41	
Rate / MT (in Rs.)=						
Amount(in Rs.) =						

SCHEDULE OF QUANTITIES (3.0)

PROJECT ::E&C works for Mechanical & Electrical package for 1x4.5 MLD Sewage Treatment Plant for BHEL Township, Barkhera, Bhopal, M.P.

Section 3.0: Electrical & C&I Works

Item No.	Description	Qty	UNIT	Weightage %	RATE (in Rs.)	AMOUNT(IN Rs.)
1	Installation of 300mm width ladder type straight run cable tray along with accessories including coupler plates	55	Nos.	0.27	Bidder need not fill any RATE or TOTAL AMOUNT here.The rate and amount will be provided by BHEL based on respective weightage of corresponding item and Price Bid Format no. TOD1Q12112/PBF/01 Rev. 0 for L1 Bidder price.	
2	Installation of 300mm width cover for ladder type cable tray	40	Nos.	0.20		
3	Installation of 150mm width perforated type straight run cable tray along with accessories including coupler plates	80	Nos.	0.27		
4	Installation of 150mm width cover for ladder type cable tray	10	Nos.	0.03		
5	Installation of 50mm width perforated type straight run cable tray along with accessories including coupler plates	40	Nos.	0.09		
6	Installation of 50mm width cover for ladder type cable tray	40	Nos.	0.09		
7	Installation of weather proof LCS with start/stop PB	18	Nos.	0.36		
8	Laying of control cable (5C X2.5)	1200	mts	0.54		
9	Installation of STP MCC FIXED DB (Centrifuge area, Auto screen area, DAF system)	5	set	0.10		
10	Installation of UPS system	1	set	0.15		
11	Installation of UPS Battery	1	set	0.00		
12	Installation of wall mounted UPSDB	1	set	0.00		
13	Installation of Double compression nickle plated brass cable glands for safe area suitable for 13-18mm OD cable	110	Nos	0.15		
14	Installation of Double compression nickle plated brass cable glands for safe area suitable for 18.5 - 20mm OD cable	40	Nos	0.05		
15	Installation of Double compression nickle plated brass cable glands for safe area suitable for 20.5 - 23mm OD cable	65	Nos	0.09		
16	Installation of Double compression nickle plated brass cable glands for safe area suitable for 46.5 - 52mm OD cable	40	Nos	0.05		
17	Installation of Double compression nickle plated brass cable glands for safe area suitable for 52.5 - 61mm OD cable	10	Nos	0.01		
18	Installation of cable lugs of 2.5sq mm	480	Nos	0.16		
19	Installation of cable lugs of 4 sq mm	40	Nos	0.01		
20	Installation of cable lugs of 25sq mm	40	Nos	0.01		
21	Installation of cable lugs of 95sq mm	10	Nos	0.00		
22	Installation of cable lugs of 185sq mm	30	Nos	0.01		
23	Installation of cable lugs of 120sq mm	10	Nos	0.00		
24	Supply & Installation of Signal cable marking/Ferruling	200	Nos	0.06		
25	Supply & Installation of Signal cable dressing material	300	Nos	0.10		
26	Installation of DO Meter	3	Nos	0.11		
27	Installation of magnetic flow meter-line size (250MM)	2	Nos	0.02		
28	Installation of Level transmitter-Hydrostatic type	4	Nos	0.15		
29	Installation of Level switch - Float type	10	Nos	0.20		
30	Installation of Level guage-Reflex Type-Side Mounted	6	Nos	0.12		
31	Installation of Pressure guage-BOUDON TUBE TYPE	18	Nos	0.36		
32	Installation of Pressure guage-DIAPHRAGM SEAL	2	Nos	0.04		
33	Installation of Pressure switch	5	Nos	0.10		
34	Installation of Junction box	9	Nos	0.18		
35	Supply of erection hardware			0.00		
36	Double compression cable glands long thread NPT type - 3/4" size	50	Nos	0.10		
37	Double compression cable glands long thread NPT type - 1/2" size	50	Nos	0.09		
38	Double compression cable glands long thread NPT type - 1" size	30	Nos	0.11		
39	Cable lugs - 3/4" size	50	Nos	0.01		
40	Cable lugs - 1/2" size	50	Nos	0.01		
41	Cable lugs - 1" size	30	Nos	0.01		
42	Laying and fixing of copper pipe electrode for earthing	4	mts	0.00		
43	Laying and termination of field cable inside PLC, PC, Printer as per Site Engineer	60	nos	1.20		
	Total =			5.64		

SCHEDULE OF QUANTITIES (4.0)

PROJECT ::E&C works for Mechanical & Electrical package for 1x4.5 MLD Sewage Treatment Plant for BHEL Township, Barkhera, Bhopal, M.P.

Section 4.0 Material Handling

Item No.	Description	Weight(in MT)	Remarks
4.1	Equipments	29.24	As per wt. in section 1.0
4.2	Piping	66.41	As per wt. in section 2.0
4.3	Misc Equipments	9.56	10% of 4.1+4.2
	Total	105.21	
	<u>say,</u>	105.00	
Rate / MT(in Rs.)=			
Total Amount=Rs.			

SCHEDULE OF QUANTITIES (5.0)

PROJECT ::E&C works for Mechanical & Electrical package for 1x4.5 MLD Sewage Treatment

Section 5.0: SUPPLY OF CPVC PIPES & Structural steel

Item No.	Item Description	Unit	Qty	Weightage %	RATE (in Rs.)	AMOUNT(IN Rs.)
5.1	1/2" CPVC PIPE THICKNESS	mts	660	0.58	Bidder need not fill any RATE or TOTAL AMOUNT here.The rate and amount will be provided by BHEL based on respective weightage of corresponding item and Price Bid Format no. T0D1Q12112/PBF/01 Rev. 0 for L1 Bidder price.	
5.2	1" CPVC PIPE THICKNESS	mts	165	0.32		
5.3	1.5" CPVC PIPE THICKNESS	mts	330	1.25		
5.4	CPVC FITTINGS	Lot	375	2.00		
5.5	Supply of structural steel	mts	2	1.00		
	Total weightage %=			5.15		