



भारतीय विमानपत्तन प्राधिकरण AIRPORTS AUTHORITY OF INDIA

संदर्भ सं० :

मा.वि. प्रा./अभि./उप म. अभि.(वि)/जी. एच. वाइ-चि. डबल्यू -16/2020-21/19-26
FILE NO. AAI/ENGG/DGM(E-E)/GHY-CW-16/2020-21

दिनांक

DATE07.01.2021.....
07.01.2021

सेवा मे / To,

M/s Hygienic World,
Parnashree Apartment, Flat 4/B-2,
Kannwachal Road, Silpukhuri,
Guwahati-781003.

विषय/Subject:- 100KLD Sewage Treatment Plant (STP) based on MBBR Treatment at LGBI Airport, Guwahati - Electrical & Mechanical works.

संदर्भ / Ref : 1) टेंडर खुलने का दिनांक / Your tender opened on Dt:04.12.2020.

2) निविदा संख्या व तारीख / NIT No. & Dt: AAI/ENGG/AGM(E-E)/GHY/NIT-09/2020-21/1113-20, Date:16.10.2020.
Bid No. 2020_AAI_60051_1

प्रिय महोदय

- उपर्युक्त कार्य के लिए आपकी निविदा अध्यक्ष, भारतीय विमानपत्तन प्राधिकरण की ओर से आप द्वारा उद्धरित मद दर जिसकी कुल राशि रु.52,49,900/- (बावन लाख उनचास हजार नौ सौ रुपये मात्र) है (जीएसटी को छोड़कर) जो कि अनुमानित लागत रु.72,14,782/- (जीएसटी को छोड़कर) से 27.23% प्रतिशत कम है।
Your tender for the work mentioned above is hereby accepted on behalf of the Chairman, Airports Authority of India at the item rates quoted by you totaling to **Rs.52,49,900.00** (Rupees Fifty Two Lakhs Forty Nine Thousand & Nine Hundred Only) (excluding GST) which is **27.23% Below** the Estimated cost of **Rs. 72,14,782/-** (excluding GST).
- उप महाप्रबंधक (इंजी.-विद्युत), उ.पू.क्षे., मा.वि.प्रा., लो. गो. ब. अ. हवाई अड्डा, गुवाहाटी इस कार्य के लिए प्रभारी इंजीनियर होंगे। आपसे अनुरोध है कि आप अपना प्रत्यायित प्रतिनिधि जिसे कि आपकी ओर से संविदा करार पर हस्ताक्षर करने की अधिकार दी गई है को उप महाप्रबंधक (इंजी.-विद्युत) के कार्यालय में करार पर हस्ताक्षर करने के लिए दिनांक 17.01.2021 तक नियुक्त करें। (संविदा करार रु 100/- के नॉन ज्युडिशियल स्टाम्प पेपर पर निष्पादित किया जाएगा और स्टाम्प पेपर की लागत आपको ही वहन करनी होगी।)
Dy. General Manager (Engg.-E), AAI, NER, LGBI Airport, Guwahati, shall be the Engineer-in-charge of the work. You are requested to depute your accredited representative, empowered to sign the contract agreement on your behalf to attend the office of the Dy. General Manager (Engg.-E) by 17.01.2021 to sign and complete the agreement. The contract agreement shall be executed on a non-judicial stamp paper of value **Rs.100/- (Hundred only)** and the cost of the stamp paper shall be borne by you.
- आपकी निविदा के साथ प्राप्त बयाना राशि रु.1,44,296.00 (एक सौ चौवालीस हजार दो सौ छियानबे रुपये मात्र) आपको कायदेशि देने के तुरंत बाद वापस किया जायेगा। कृपया इस पत्र के जारी होने के 10 दिन में सुरक्षा जमा के लिए रु.5,24,990.00 (पाँच लाख चौबीस हजार नौ सौ नब्बे रुपये मात्र) जमा करा दें, ऐसा नहीं करने पर संविदा दस्तावेज के पृष्ठ 63 पर दी गई खण्ड 1 (A) के अनुसार उपरोक्त राशि आपके रनिंग बिल से काट दी जाएगी।

गुणवत्ता सुरक्षा गारंटी (क्यूपीवीजी) के रूप में डिमांड ड्राफ्ट No.005036, Dt: 30.12.2020 की राशि रु.16,119/- जीसीसी क्लॉज 13, पृष्ठ-56 के अनुसार आपके द्वारा जमा की गई है, दोषपूर्ण देयता अवधि के सफल समापन होने के बाद का भुगतान किया जाएगा।

The earnest money amount of **Rs.21,694.00** (Rupees Twenty One Thousand Six Hundred & Ninety Four Only), received along with your tender will be refunded to you on award of work. Please deposit **Rs.5,24,990.00** (Rupees Five Lakhs Twenty Four Thousand Nine Hundred & Ninety Only) towards Security Deposit within 10 days from the date of issue of this letter, failing which, the same will be deducted from your running bills as per Tender Clause-1A on page-63 of the contract document.

The quality protection guarantee in the form of Demand Draft vide No.005036, Dt:30.12.2020 amounting to Rs.16,119/- submitted by you as per GCC clause 13, Page-56 shall be released after the successful completion of work.

क्रमशः

4. आपसे अनुरोध है कि संविदा श्रमिक विनियमन एवं समापन अधिनियम 1970 और संविदा श्रमिक (विनियमन एवं समापन) केन्द्रीय नियमावली 1971 और केन्द्रीय और राज्य सरकार के न्यूनतम मजदूरी अधिनियम और नियमों का पालन करें।
You are requested to comply with the provisions of Contract Labor (Regulation and Abolition) Act of 1970 and Contract Labor (Regulation and Abolition) Central Rules 1971 and Minimum wages Act & Rules there of Central and State Governments.
5. आपको निर्देश दिए जाते हैं कि, आप सहा. महाप्रबंधक (इंजी.-विद्युत), भा.वि.प्रा., लो. गो. ब. अ. हवाईअड्डा, गुवाहाटी से तत्काल सम्पर्क करें जो कि आपको कार्यस्थल सुपेर्द करने की व्यवस्था करेंगे। कृपया यह नोट करें कि काम करने का समय छह (06) महीने है जोकि कार्य आदेश देने के 10 दिन के बाद की तारीख से गिना जाएगा।
You are also directed to contact Asstt. Gen. Manager (Engg.-E), AAI, LGBI Airport, Guwahati, immediately who will arrange to handover the site to you. Please note that the time allowed for carrying out the work is Six (06) Months, which shall be reckoned from 10th day of issue of the order.
6. दोष दायित्व अवधि के अनुबंध के कार्यों के पूरा होने की तारीख से बारह (12) महीने है।
Defect liability period of the contract is **TWELVE (12) MONTHS** from the date of completion of works.
7. संविदा के संबंध में आगे किया जाने वाला पत्राचार सामान्यतः उप महा प्रबंधक (इंजी.-विद्युत), उ.पू.क्षे., भा.वि.प्रा., लो. गो. ब. अ. हवाईअड्डा, गुवाहाटी से किया जाए।
Any further correspondence in connection with the contract should normally be addressed to the **Dy. General Manager (Engg.-E), AAI, NER, LGBI Airport, Guwahati.**
8. कृपया पावती भिजवायें।
Please acknowledge the receipt.

भवदीय / Yours faithfully,

-S/d-

(B.N. GHATARE)

उप महाप्रबंधक (इंजी.-विद्युत)

Dy. General Manager (Engg.-E),

कृते अध्यक्ष की ओर से

For and on behalf of Chairman

भारतीय विमानपत्तन प्रधिकरण, उ.पू.क्षे.
Airports Authority of India, NER.

Encl : Schedule A.

N.O.O.: Copy to

- हवाईअड्डा निदेशक, भा.वि.प्रा. लो.गो.ब.अ. हवाईअड्डा, गुवाहाटी-15
Airport Director, AAI, LGBI Airport, Guwahati-15.
- सयुक्त. महा प्रबंधक (वित्त) भा.वि.प्रा., लो.गो.ब.अ. हवाईअड्डा, गुवाहाटी-15
Jt.GM (Fin). AAI, LGBI Airport, Guwahati-15.
- महा. महा प्रबंधक (इंजी.-विद्युत), भा.वि.प्रा. लो.गो.ब.अ. हवाईअड्डा, गुवाहाटी-15
AGM (Engg.-E), AAI, LGBI Airport, Guwahati-15
- महा. महा प्रबंधक (विग.), उ.पू.क्षे. भा.वि.प्रा. लो.गो.ब.अ. हवाईअड्डा, गुवाहाटी-15
AGM (Vig.), NER, AAI, LGBI Airport, Guwahati -15
- प्रबंधक (इंजी.-विद्युत), भा.वि.प्रा. लो.गो.ब.अ. हवाईअड्डा, गुवाहाटी-15
Manager (Engg.-E), AAI, LGBI Airport, Guwahati-781 015.
- करार/Agreement
- पत्रावली/File.

(B.N. GHATARE)

उप महाप्रबंधक (इंजी.-विद्युत)

Dy. General Manager (Engg.-E),

कृते अध्यक्ष की ओर से

For and on behalf of Chairman

भारतीय विमानपत्तन प्रधिकरण, उ.पू.क्षे.
Airports Authority of India, NER.



AIRPORTS AUTHORITY OF INDIA
ENGINEERING WING (E)
LGBI AIRPORT, GUWAHATI - 781 015

SCHEDULE OF QUANTITIES

Name of work: 100KLD Sewage Treatment Plant (STP) based on MBBR Treatment at LGBI Airport, Guwahati - Electrical & Mechanical works.		No. of Qty	Units	Rate	Amount
Sl. No	Description of Work / Item(s)				
	SH-I - SITC of 100KLD STP				
	SEWAGE TREATMENT PLANT (MBBR TECHNOLOGY)				
1.00	Design, supplying, installing, testing & commissioning of Sewage Treatment Plant (excluding excavation, back filling & disposal of surplus earth MS/Civil construction work) for the following duty: Nature of effluent - Domestic Sewage from toilet, kitchen waste water shall be discharged into the STP. Design to take consideration of same. Daily average flow - 100 Cum / Day pH - 7.5 - 8.5 BOD5 - 250 - 450 Mg/L S. Solids - 200 - 400 Mg/L COD - 600 - 800 Mg/L Oil & Grease - 50 Mg / L Effluent discharge standard after treatment pH - 6.0 - 8.5 BOD5 - Less than 20Mg/L S. Solids - Less than 10 Mg/L COD - Less than 60 Mg/L Oil & Grease - Less than 5 Mg / L Sewage treatment plant shall include the following items: Screen Chamber Sewage equalization tank/sump MBBR Reactor Secondary Settling Tank Chlorine Contact Tank Sludge Holding Tan Filtration through MGF & ACF Air Blowers, Pumps & equipment Piping, valves etc Electrical Panel & Cabling Quoted rate should include Approval from pollution board at initial & various other stages of works including preparation of report/ drawings as per pollution board requirement, arrangement of raw sewage for testing & commissioning. Contractor shall include the cost of all chemicals (consumed during testing & commissioning and the cost of such items of works which are not explicitly mentioned above, but are mandatory to have pollution board approval.				
1.01	Supply, Installation, Testing and Commissioning of Stainless Steel Perforated, Corrugated Bar Screen with manual lifting arrangement.	1.00	No.	20000.00	20000.00

Sl. No	Description of Work / Item(s)	No. of Qty	Units	Rate	Amount
2.00	Supply of MS hot dip galvanized puddle flanges in accordance to BS:10 table D as required to be provided (in the structural slab and wall) of various diameters. Puddle flanges shall be provided for all the structural component of the STP. The installation of the puddle flanges shall be carried out by the Civil contractor in accordance to the Civil GA drawing (to be prepared by the STP contractor) at the required levels & position; under the supervision of the STP contractor.	1.00	Lot	30000.00	30000.00
3.00	Supply of plastic manhole step/ foot rest (@ 300 mm c/c) with polypropylene compound injection molded around 12 mm dia. (Fe-415) steel reinforcing bar. Provision of the foot rest is envisaged in various tanks/ components of the STP for the purpose of accessibility. The installation of the foot rest shall be done by the civil contractor as per civil GA drawing.	1.00	Lot	60000.00	60000.00
4.00	Supply, installation, testing & commissioning of electronic type Auto Water Level Controller indicator and controller for automatic operation of the system with high/low level alarm complete with auxiliary NO/ NC contacts for each tank.	7.00	Nos.	15000.00	105000.00
5.00	Supply, installation, testing & commissioning of non clogging type pumps capable of handling solids up to 35mm having CI casing & CI impeller complete with all accessories, motor of required capacity. Delivery header with isolation valve, pressure gauge on delivery line with isolation cock, level controller (with wiring) to control the level of sump automatically. Pumps shall have following duty:				
5.01	Supply, Installation, Testing and Commissioning of Submersible Sewage lifting pump (from Septic Tank to Equalization Tank) Capacity- 1HP, 0.75KW, Flow Rate- 2m3/hr Head- 8-10m	3.00	Nos.	35000.00	105000.00
5.02	Supply, Installation, Testing and Commissioning of Submersible Sewage lifting pump (from Equalization Tank to MBBR Tank) Capacity- 2HP, 1.5KW Flow Rate- 5-6m3/hr Head- 8-10m	2.00	Nos.	44000.00	88000.00
5.03	Supply, Installation, Testing and Commissioning of Sludge pump (from Clarifier Tank to Sludge Sump) Capacity- 1HP, 0.75KW Flow Rate- 5- m3/hr Head- 3-4m Cost shall be inclusive of PVC flexible Hose pipe (for piping submerged in effluent) with MS epoxy piping (for piping non-submerged in effluent). Provision of guide ropes to guide submersible pump from upper level to operational level in sump basin with channels / angle section of MSEP shall be made by the STP contractor.	2.00	Nos.	42000.00	84000.00
6.00	Air diffusion system shall include the following				
6.01	Supply, Installation, Testing and Commissioning of twin type rotary air blowers (1W + 1S) capable of delivering 287 cum/hr of free air at 0.45 kg/cm2 driven through "V" belt or directly coupled through flexible coupling to a TEF Cmotor of suitable HP Suitable for 415 ± 10% volts, 3 phase, 50 cycles A/C supply. (for MBBR Tanks)	2.00	Nos.	130000.00	260000.00
6.02	Supply, Installation, Testing and Commissioning of twin type rotary air blowers (1W + 1S) capable of delivering 215 cum/hr of free air at 0.45 kg/cm2 driven through "V" belt or directly coupled through flexible coupling to a TEF Cmotor of suitable HP Suitable for 415 ± 10% volts, 3 phase, 50 cycles A/C supply. (for Equalization Tank)	2.00	Nos.	150000.00	300000.00
6.03	Air piping shall comprise of pipes droppers/ laterals with MS (epoxy coated) Header complete with all fittings such as tees, crosses, plugs, sockets, elbows, reducers, supports & clamps, puddle flanges etc cutting chases & making good. Contactor to submit detailed P & I indicating their proposal.	1.00	Lot	155000.00	155000.00
6.04	Supply, Installation, Testing and Commissioning of Fine Bubble Diffusers, Dimensions: 63mm dia. x 1000mm long, EPDM Membrane Type, Air Flow Rate: 3m3/hr- 9m3/hr (Optimal 2m3/hr - 5m3/hr)	102.00	Nos.	1200.00	122400.00
6.05	Bronze Ball valve and air dispersion grid as required for STP as described above.	1.00	Lot	90000.00	90000.00

Sl. No	Description of Work / Item(s)	No. of Qty	Units	Rate	Amount
7.00	Providing and fixing all piping (as described below) and isolation control valves for making the system complete. SS 304: Submerged air piping MS Epoxy: Air piping & pumped effluent riser (non-submerged) PVC piping: Pumped effluent (submerged) & tank overflow pipe line GI (Heavy): Interconnecting pipe line after delivery header of pump/ filter	1.00	Lot	200000.00	200000.00
8.00	Supply, installation, testing and commissioning of FAB (MBBR) Media, High Strength Hollow Fiber, Pore Size- 0.6micron	36.00	Cum	16000.00	576000.00
9.00	Supply, installation, testing and commissioning of PVC tube deck settling media to be installed in Clarifier Tank, V-Type Media, Settling Velocity- 0.5m/s	15.00	Cum	15000.00	225000.00
10.00	Supply, installation, testing & commissioning of Chlorine dosing system comprising of 200 ltrs HDPE / FRP tank with 0-12 lph electronic metering type pump.	1.00	No	35000.00	35000.00
11.00	Supplying, installing, testing & commissioning of horizontal centrifugal filter feed water pumps CI Head & Base, Bronze Impeller along with motor, pressure gauge with isolation cock, Isolation valve, NRV on delivery line. Isolation valve, stainer (with by-pass) at suction. Mechanical seal, suitable vibration elimination pads of approved design, drain pipe with valve (25 dia) for the pump. The pump shall be suitable for 415±10% volts 3 phase AC supply. (1 Working + 1 Standby)				
11.01	Supply, Installation, Testing and Commissioning of Centrifugal Filter Feed pump (from Chlorination Tank to MGF) Capacity- 1.5HP, 1.12KW Flow Rate- 5-6m3/hr Head- 3-4m	2.00	Nos.	40000.00	80000.00
12.00	Providing, fixing, testing & commissioning of vertical FRP filter with adequate dirt holding capacity. Fabricated from FRP as per manufacturer's specifications complete with initial charge filter media including painting Including concrete foundation with cement plaster complete as required. The filter shall also be provided with set of internals for raw water inlet and bottom collecting system. Complete with frontal piping (heavy) and butterfly valves designed on 1.50 m / sec velocity.				
12.01	Multigrade Filter Filtration Rate 5000-6000L/Sqm/Hr. Capacity: 1.4-1.7 LPS each	1.00	No.	330000.00	330000.00
12.02	Activated Carbon Filter Filtration Rate 5000-6000L/Sqm/Hr. Capacity: 1.4-1.7 LPS each	1.00	No.	370000.00	370000.00
13.00	Providing and laying GI pipes (heavy class) (Tertiary Treatment Equipment Piping) of approved make conforming to IS:1239-1982 complete with GI fittings such as tees, crosses, plugs, sockets, elbows, reducers, unions, flanges, sleeve pieces, check nuts etc. in including cutting and making good the walls, floors, RCC work etc. cutting chases & filling the same with cement concrete 1:3:6 (1cement :3 coarse sand : 6 graded stone aggregate 20 mm nominal size) or cement mortar 1:4 (1 cement:4 coarse sand) as required, including painting the exposed pipes with desired shade of enamel paint over a coat of primer.	70.00	Mtr.	550.00	38500.00
13.01	50 mm dia.				
14.00	Providing and fixing cast iron butterfly valves tested to 15 kg/ Sq-cm pressure (Including flanges).	12.00	Nos.	2500.00	30000.00
14.01	50 mm dia.				
15.00	Providing and fixing horizontal flap type non-return valve tested to 15 kg/Sq-cm pressure of approved make (including flanges)	12.00	Nos.	3000.00	36000.00
15.01	50 mm dia.				

Sl. No*	Description of Work / Item(s)	No. Qty	Units	Rate	Amount
16.00	Supply, installation, testing and commissioning of Magnetic flow meter suitable capacity with preamplifier and microprocessor including necessary cabling, conduit, etc. complete suitable for raw sewage application.	2.00	Nos	45000.00	90000.00
17.00	Supply, installation, testing & commissioning of Filter Press; MS Structure, P.P. Recessed Plate Type, Vertical 470mm x 470mm x 18 Chambers, along with 2nos. of 1HP Screw Pump for feeding of the Sludge (1 W + 1 Standby)	1.00	No.	200000.00	200000.00
18.00	MAIN DISTRIBUTION BOARD (SEWAGE TREATMENT PLANT) Design, fabrication, assembling, wiring, supply, installation, testing and commissioning of motor control centre shall be fabricated out of 14 gauge CRCA sheet steel in form in 3b formation with reinforcement of suitable size angle iron, channel 'T' sections irons and /or flats wherever necessary. Cable gland plates shall be provided on top as well as at the bottom of the panels. Panels shall be treated with all anticorrosive process before painting as per specifications with 2 coats of red oxide primer and final approved shade of powder coated paint. 2 Nos. earthing terminals shall be provided for 3 phase, 4 wire, 50 Hz supply system. Lifting hooks shall also be provided in case of large panels. Approval shall be taken for each panel before fabrication. Cadmium Plated hardware shall be used in fabrication of panels. Quoted rates shall inclusive of cables, cable trays, control cabling, earthing (in accordance to specification) with earthing from panel to each motor / equipment. INCOMER 1 Nos. 100 Amp four pole Moulded Case Circuit Breaker (Ics value 25 KA) with built in thermal based release unit with adjustable setting . BUSBARS 200 Amp TPN busbars of high conductivity electrolytic quality aluminium alloy. INSTRUMENTS 1 Set of digital multifunction meter (Ammeter + Voltmeter) for 3 phase, 4 wire operation as per specification. 1 Sets of RYB phase indicating lamps controlled by 2 amp MCB. OUTGOING a) 2 Nos. suitable rating MPCB for 7.5HP Blower Motor Starter (Auto/Manual) (3 Phase) and timer. Each compartment shall contain auto / manual selector switch and indicating / pushbutton lamps with MCB for ON / OFF / TRIP of motor. b) 2 Nos. suitable rating MPCB for 3HP Blower Motor Starter (Auto/Manual) (3 Phase) and timer. Each compartment shall contain auto/manual selector switch and indicating lamps with MCB's for 'ON/OFF/TRIP' status of motor. c) 3 Nos. suitable rating MPCB for 1HP Submersible Sewage Lifting Pump Motor Starter (3 Phase). Compartment shall contain auto/manual selector switch and indicating lamps with MCB's for 'ON/OFF/TRIP' status of motor d) 2 Nos. suitable rating MPCB for Nos. 7.5 KW direct on line starter and outgoing feeders to filter feed pump (including 1 no. standby). Each compartment shall contain auto/manual selector switch and indicating lamps with MCB for 'ON/OFF/TRIP' status of motor e) 2 Nos. suitable rating MPCB for Nos. 2.5 KW direct on line starter and outgoing feeders to irrigation water pump (including 1 no. standby). Each compartment shall contain auto / manual selector switch and indicating lamps with MCB for 'ON/OFF/TRIP' status of motor f) 2 Nos. suitable rating MPCB for 2HP Submersible Sewage Lifting Pump Motor Starter (3 Phase). Each compartment shall contain auto/manual selector switch and indicating lamps with MCB for 'ON/OFF/TRIP' status of motor g) 2 Nos. suitable rating MPCB for 1HP Filter Feed Pump Motor Starter (3 Phase). Each compartment shall contain auto/manual selector switch and indicating lamps with MCB's for 'ON/OFF/TRIP' status of motor h) 2 Nos. suitable rating MPCB for 1HP Sludge Pump Motor Starter (3 Phase). Each compartment shall contain auto/manual selector switch and indicating lamps with MCB's for 'ON/OFF/TRIP' status of motor i) 2 Nos. suitable rating MPCB for 1HP Screw Pump Starter (3 Phase). Each compartment shall contain auto/manual selector switch and indicating lamps with MCB's for 'ON/OFF/TRIP' status of motor 20A TP MCB - 2 Nos 6A SP MCB - 4 Nos	1.00	No.	180000.00	180000.00

Sl. No	Description of Work / Item(s)	No. of Qty	Units	Rate	Amount
	SH:II - O&M of 100KLD STP				
19.00	Annual Operation, upkeeping and maintenance of all equipments, machineries and accessories related to 100KLD Sewage Treatment Plant involving operation minor condition of the system, ensuring serviceability / satisfactory working condition of the system, maintenance of records / documentation of the above works etc., as per the detailed specification, terms & conditions covered under this contract on all days including Sundays & holidays of the month complete as required. The required minimum man power (One Technician cum Operator in each shift for round the clock operation and One sweeper in General shift) to be deployed for each shift of 8 hrs. for the equipment to be operated and upkept shall be as per Technical specification and special condition of contract. Required spares and chemicals shall be issued by department as per site requirement.				
19.01	During DLP	1.00	Job	480000.00	480000.00
19.02	First Year	1.00	Job	480000.00	480000.00
19.03	Second Year	1.00	Job	480000.00	480000.00

Total of SH I : 3809900.00

Total of SH II : 1440000.00

Total Rs. : 5249900.00

(Rupees Fifty Two Lakhs Forty Nine Thousand & Nine Hundred Only).

Note: Rates are excluding GST, which shall be applicable as per prevailing rate.

Rghalan
07/01/2024

Dy. Gen. Mgr. (Engg.-E)
AAI, NER, LGBI Airport, Guwahati