



भारतीय विमानपत्तन प्राधिकरण
AIRPORTS AUTHORITY OF INDIA



BN 9290/8332:0414
ISO 9001: 2008

No. AAI/KOL/CNS-STORE/SITC/OFC-LAYING/WO/2020-21

Date: 13.01.2021.

To,
M/s. R.R.Gupta Steel Industries.
A 15 Somdutt City Garh Road, Meerut U.P:250004
Email id: rrgupta.meerut01@live.com Mob.No. 7015414241

ORIGINAL

Sub: - **Work Order for SITC OF LAYING 24 CORE SINGLE OFC BETWEEN OLD REMOTE (VHF TX STATION) & ATS BUILDING AT NSCBI AIRPORT, KOLKATA.**

References: -

- i) Your Bid No. 213871 against this office E-Tender No. 11020(19)/6/2020-CNS-E R (Tender Id: 2020_AAI_59975_1).
- ii) Your offer documents against the above mentioned Tender.
- iii) AAI Letter of Intent No. AAI/KOL/CNS-STORE/SITC/OFC-LAYING/LOI/2020-21 dated 29.12.2020.
- iv) Your acknowledgment to AAI Letter of Intent dated 30.12.2020.

Dear Sir,

Reference may be made to the above mentioned correspondences and your offer (Technical, Commercial proposal and various subsequent technical clarifications) submitted against above referred tender.

Airports Authority of India, hereinafter referred to as purchaser, is pleased to place a purchase order for "SITC Of Laying 24 Core Single OFC Between Old Remote(VHF Tx.Station) & ATS Building at N.S.C.B.I.Airport,Kolkata" as per terms and conditions, specifications contained in reference documents.

1. Price :

The Price of "SITC Of Laying 24 Core Single OFC Between Old Remote(VHF Tx.Station) & ATS Building at N.S.C.B.I.Airport,Kolkata" is Rs. 17,52,800.00 (Rs. Seventeen Lakh Fifty Two Thousand Eight Hundred only) plus GST as applicable.

The Price of "SITC Of Laying 24 Core Single OFC Between Old Remote(VHF Tx.Station) & ATS Building at N.S.C.B.I.Airport,Kolkata" is firm and fixed. The price is inclusive of all duties and taxes, excluding GST.

2. **Bill of material and cost of the work order:**

Sl No.	Items	Qty	Rate	AMOUNT
1.	24 core single mode OFC armoured cable	2700 meters	110.00	297000.00
2.	Joint Closure	05	5000.00	25000.00
3.	FDP	06	15000.00	90000.00
4.	Ethernet Media converter	08	10000.00	80000.00
5.	02 Channel Transmitter Video Optical Multiplexer	01	20000.00	20000.00
6.	02 Channel Receiver Video Optical Multiplexer	01	20000.00	20000.00
7.	SC to SC Single mode OFC patch cord -1 meter	24	1200.00	28800.00
8.	SC to SC Single mode OFC patch cord -3 meters	48	1000.00	48000.00
9.	SC to SC Single mode OFC patch cord-5 meters	12	1500.00	18000.00
10.	CAT 6 UTP LAN Cable	200 meters	30.00	6000.00
11.	RJ 45 connector	100	100.00	10000.00
12.	19 U rack	03	10000.00	30000.00
13.	GPR scan	2500 meters	50.00	125000.00
14.	UNDER GROUND CONDUIT PIE	2600 meters	50.00	130000.00
15.	HDD OFC LAYING METHODOLGY	2500 meters	250.00	625000.00
16.	SITC WORK	01	200000.00	200000.00
	TOTAL			17,52,800.00

Total Rs.17,52,800.00 (Rupees Seventeen Lakh Fifty-Two Thousand Eight Hundred only) plus GST as applicable.

3. **Time Schedule:**

SL. No.	NAME OF THE EVENT	DATE	REMARKS
01.	EFFECTIVE DATE	21.01.2021	INTIMATION BY EMAIL/FAX
02.	SIGNING CONTRACT ON AWARD	04.02.2021	ON Rs.100.00 NON JUDICIAL STAMP PAPER (Annexure-IV)
03.	SUBMISSION OF PBG	19.02.2021	ON Rs.100.00 NON JUDICIAL STAMP PAPER (Annexure-V)
04.	COMPLETION OF JOB		50 days from Effective Date.

4. **Terms of Payment:**

- A) 90% of purchase order price for complete of **SITC OF LAYING 24 CORE SINGLE OFC BETWEEN OLD REMOTE (VHF TX STATION) & ATS BUILDING AT NSCBI AIRPORT, KOLKATA** including documentation against receipt of goods at site in good physical condition on submission of the following documents in ORIGINAL .
- (1) Pre- receipted GST Invoice/billing in triplicate after completion of job.
 - (2) Itemized Packing list with cost of each item + 2 copies.
 - (3) Certificate of **completion/Installation issued** by authorized representative of AAI for after completion of site.
 - (4) Delivery Challan in 2 copies with duly receipt of items at consignee's site.
 - (5) Payment shall be released after acceptance of the supply, installation & commissioning report only.
- B) Balance 10% of the amount will be deducted towards the Security deposit from the payment that will be returned after completion of 01 year onsite Warranty/ guarantee period (or as offered by the manufacturer) whichever is higher, from date completion of SITC (if the contractor does not submit the PBG with validity till 90 days after completion of warranty period). Format of the PBG as per **Annexure II**
- C) **Payment will be made as per actual requirement & measurement for SL no 1, 13, 14 & 15 as mentioned in 10B (scope of work) after successful completion of SAT**

5. **Paying Authority:**

- 5.1 The Regional Executive Director (ER), Airports Authority of India, NSCBI Airport, Kolkata, West Bengal-700 052 is the Paying Authority.
- 5.2 Payment shall be released through Bank Transfer/RTGS; the Supplier/Contractor is required to submit his bank details in his letter head pad or in the form of cancelled cheque.

6. **Liquidated Damages / Compensation for Delay:**

- 6.1 Time is the essence of the Contract.
- 6.2 If the contractor fails to complete the supply / work within time fixed under the contract, he shall pay to the AAI without prejudice to any other rights or remedy as may be available to the purchaser, an agreed compensation amount calculated @1/2% of the total value of the uncompleted portion of the work per week or part thereof subject to a maximum value equal to the value of the Performance Bank Guarantee.
- 6.3 The amount of compensation for delay and waiver of compensation for delay in case of justified reasons shall be decided at the discretion of Accepting Authority and the same shall be final and binding on the contractor. Time taken by AAI and local statutory authorities for approval of drawings, design, estimate, etc., force majeure reasons and any other reasons beyond control of the contractor shall be considered as justified reasons. The amount of compensation may be adjusted or set off against any sum payable to the contractor under this or any other contract with AAI.
- 6.4 Appeal for waiver of compensation for delay with due justification shall be decided as per the provisions of relevant clause of the Delegation of Powers (DOP) of Airports Authority of India. The decision of the competent authority on appeal shall be final and binding on the contractor.

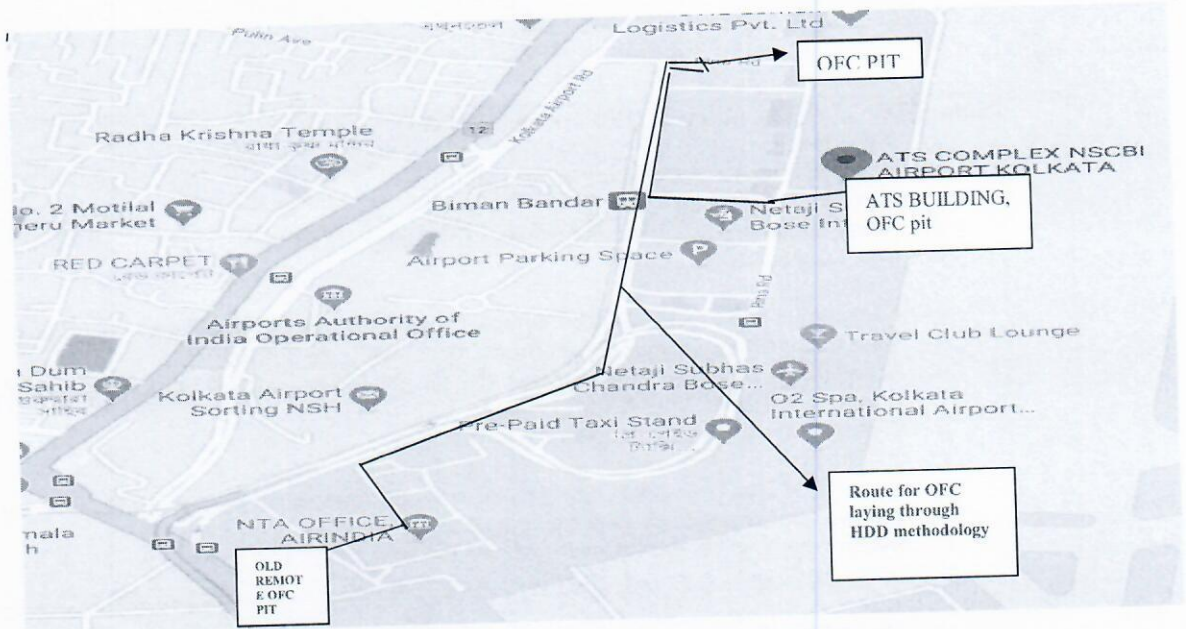
7. **Guarantee/Warranty:**

- 7.1 The material supplied should be under Guarantee/warranty for a period of minimum ONE year or as offered by the manufacturer whichever is more, commencing from "Commissioning Date". AAI shall appoint maintenance in-charge for the purpose of implementation & monitoring of the work.
- 7.2 Complete hardware and Software shall be guaranteed against all defects/bugs and for a satisfactory performance, as per all the listed features, during the service period.
- 7.3 The contractor shall attend at his own expense and get the defect/bugs removed in the systems as detected by AAI during the period of warranty.

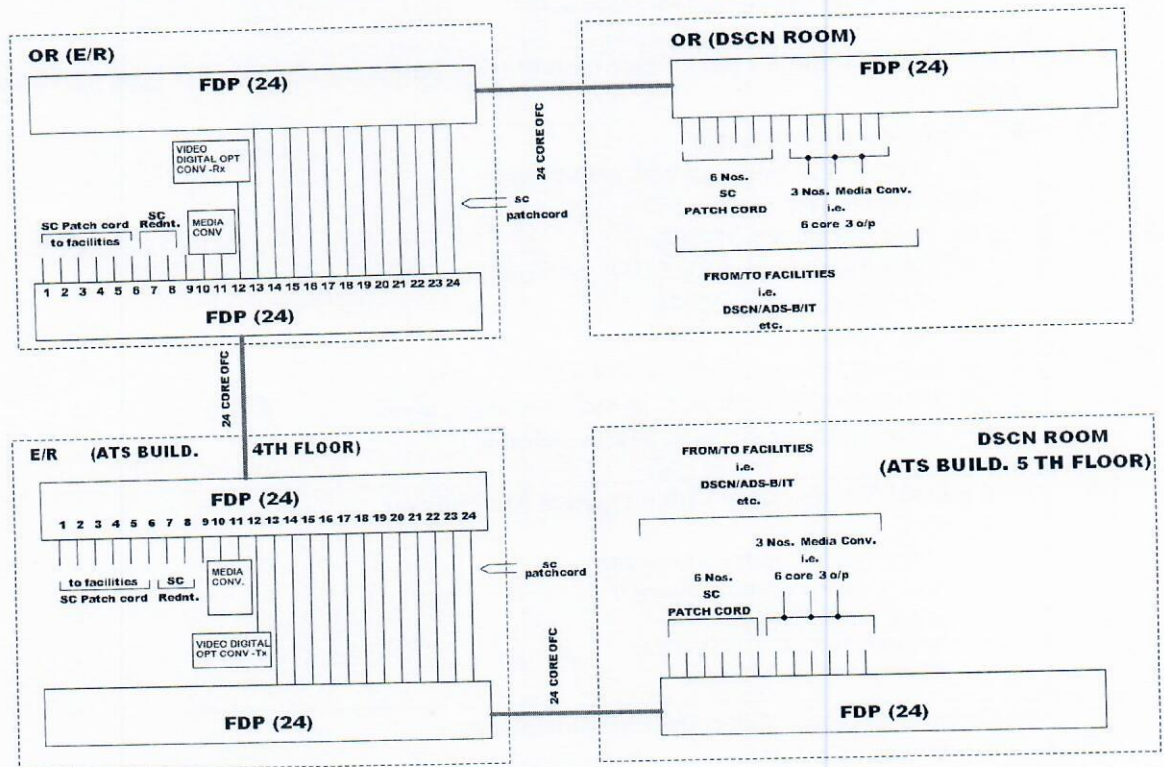
8 **Performance Bank Guarantee:**

- 8.1 The contractor shall submit an unqualified Contract performance guarantee (in lieu of Contract Performance security) of the value equivalent to 10% (ten percent) of the total contract price to AAI in the form of an irrevocable and unconditional bank guarantee on scheduled commercial bank as per Performa attached as **Annexure-II**. The guarantee shall be submitted within 30 calendar days from the Effective Date, and will be valid till 90 days after the end of the period of contract. In case contractor fails to submit the PBG within stipulated period, interest @ 12% p.a. on performance Guarantee amount would be levied (non-refundable) for delayed period of submission and shall be deducted from EMD or First running Bill. In case, contractor fails to submit performance bank guarantee within 60 days, AAI reserve the right to forfeit EMD and cancel the order.
- 8.2 The performance guarantee amount shall be payable to AAI without any condition whatsoever and the guarantee shall be irrevocable.
- 8.3 The performance guarantee shall be deemed to govern the following guarantees from the contractor, in addition to other provisions of the guarantee:
 - 8.3.1 The Hardware / Software supplied under the contract shall be free from all defects / bugs and upon written notice from AAI, the contractor shall fully remedy , free of expenses to AAI, all such defects / bug as developed under the normal use of the said hardware / software within the period of guarantee/Warranty.
 - 8.3.2 The performance guarantee is intended to secure the performance of the entire system. However, it is not to be construed as limiting the damages stipulated in any other clause.
- 8.4 The performance guarantee will be returned to the contractor at the end of the warranty period.
- 8.5 The contractor as per operation, installation, maintenance manuals and performance guarantee tests supplied by the contractor, will do the loading, installation & commissioning of systems. The contractor will be fully responsible for the guaranteed performance of the supplied systems and warranty obligations. In case of any problem after commissioning and during guarantee period the contractor will depute his supervisor(s) to AAI's site within 24 hours of intimation to remove all defects at contractor's cost.

9 PROPOSED ROUTE OF OFC LAYING BETWEEN OLD REMOTE (VHF TX STATION)
Via AIR INDIA OFFICE & ATS BUILDING AT NSCBI AIRPORT, KOLKATA



10 A) OFC DISTRIBUTION & MEDIA CONVERTER INSTALLTION LOCATION :-



10 B) SCOP OF WORK:-

Sl No.	Details Description	Quantity
1	Core OFC: 24 core single mode OFC armoured cable a) Type- G-652 b) Attenuation db/Km: 1550nm $\leq$ 0.25db/Km c) Wavelength: 1550nm d) Macro Bending Loss: (100 turns; $\varnothing$50mm) @1550nm: $\leq$ 0.05db e) Core Diameter: $65.2 \pm 3\mu\text{m}$ f) Cladding diameter: $125 \pm 2\mu\text{m}$ g) Fiber colour: Blue, Orange, Green, Brown, Grey, White, Red, Yellow Violet, Pink, Aqua h) Tube Colour: Blue, Orange, Green, Brown, Grey, White, Red, Black i) Acceptable link loss Budget calculation: (0.25db X Fiber Length) + 0.1db X No of Splice + connector loss (each X 0.5db) @1550nm. j) Cable cut off wavelength: $\leq$1260nm. k) OTDR check & report is required while commissioning of 24 core ofc. l) Fiber loss of each core should be within the specified limit mentioned by OEM of OFC cable. m) Splicing of fiber should be done with proper splicer machine. n) Supplied cable will be ISI/ISO certified with brochure.	2700 meters
2	Joint Closure a) Type: CLS-148 b) No of Cable Port: 4 c) Max Cable Diameter Allowed: 18mm d) Dimension: 465 x 180 x 122mm³ e) Max No of Cable Tray: 4 f) Max Capacity (single Fiber Spliced): 48	05
3	FDP: Rack mount 24 port Fibre distribution panel suitable for SC type patch cord only.	06
4	Ethernet Media converter a) Type: UTP to Single-mode SC (15 km) fiber b) Connector: SC c) Optical Frequency: 1310nm. d) Cable Types: Copper: Cat 5 UTP and higher Fiber: Single-mode e) Input supply voltage-12 Vdc f) Power consumption-6 W g) Operating temperature-0°C to 40°C (32°F to 104°F) h) Dimensions- Fit to Media Converter 19-Module Chassis i) Relative humidity-5% to 95% (non-condensing)	08
5	02 Channel Transmitter Video Optical Multiplexer a) Distance:0-20 Km b) Video Port:02 Channel Transmitter c) Audio: 1 Channel stereo Audio d) Wavelength:1310nm e) Adapter: 100-240 DC 5V 1.2A f) Dimension:11*8.5*2.7cm	01
6	02 Channel Receiver Video Optical Multiplexer a) Distance:0-20 Km	01

	b) Video Port:02 Channel Receiver c) Audio: 1 Channel stereo Audio d) Wavelength:1310nm e) Adapter: 100-240 DC 5V 1.2A f) Dimension:11*8.5*2.7cm	
7	SC to SC Single mode OFC patch cord -1 meter a) Optical Fiber: Coming single-mode OFC G-652 duplex mode b) Cable Type: PVC & LSZH on request 0.9mm/2.0mm/3.0mm Simplex & duplex	24
8	SC to SC Single mode OFC patch cord -3 meters a) Optical Fiber: Coming single-mode OFC G-652 duplex mode b) Cable Type: PVC & LSZH on request 0.9mm/2.0mm/3.0mm Simplex & duplex	48
9	SC to SC Single mode OFC patch cord-5 meters a) Optical Fiber: Coming single-mode OFC G-652 duplex mode b) Cable Type: PVC & LSZH on request 0.9mm/2.0mm/3.0mm Simplex & duplex	12
10	CAT 6 UTP LAN Cable	200 meter s
11	RJ 45 connector	100
12	19 U rack suitable for 24 port FDP	03
13	GPR: Ground penetrating radar scan of proposed route a) GPR scan to get information of sub surface utility below ground level with layer wise and level is require. b) Recommended safe layer below the ground level may please be provided for HDD process. c) Soft copy of GPR report is required. d) One colour hard copy of GPR report is required.	2500 meter s
14	UNDER GROUND CONDUIT PIE-Laying of Single High-Density Polyethylene Permanently Lubricated Ducts for OFC underground conduit of inner diameter of 40 mm a) Providing & Laying of HDPE pipe must be as per the recommended safe layer below the ground level which is defined in GPR report. b) Providing and laying of 40 mm HDPE single duct pipe must be at minimum of 1.65 mtr depth. In case the depth is not achievable, any depth deviation must be approved by engineering in charge of the project of AAI with supporting GPR report. c) When OFC is laid through ATS building wall it must be protected by conduit pipe with clamp. d) HDPE & conduit pipe must be of environment Stress Crack Resistance (ESCR), Impact Resistance, Crush Resistance, Low Coefficient of Friction & Temperature Resistance.	2600 meter s
15	OFC LAYING METHODOLGY: Through Horizontal Directional Drilling (HDD)machine. a) HDD process must be done on recommended safe level as per the GPR report & on proposed route only. b) 24 core single mode OFC armoured cable must be placed inside the HDPE duct. c) Duct integrity test (DIT), blowing and pulling of OFC with splicing must be done during this process. d) No manual pulling of OFC is allowed e) One number of 2.5 mm dia stain less steel wire should be pushed in HDPE duct for future use of OFC pulling. f) Pit should be of metal chamber of size 01x01x01 meter with concrete cover. Numbers of pits will be as per the requirement depends on HDD methodology. g) Any excavation for making pits (Manhole) over bitumen and RCC concrete proposed road (route) must be done very precisely.	2500 meter s

	h) Bitumen and concrete road should be properly restored soon after job is done . i) Repairing of track/pucca road/ concrete road/ toll crossing gate/ area/ surface to original position by ramming and concreting wherever required soon after the work is over within the given time frame of 45 days from the mentioned effective date in work order. j) All safety norms must be strictly adhered like use of hard barricade, safety cone and warning tape while execution of work for the pit/drilling. k) Safety jacket and helmet is mandatory while execution of work for all peoples. l) Manhole cover should be of concrete of size 1mtr length x 1mtr breath x 0.075mtr depth with supporting metal angle structure of 75mm x 75mm x 6mm. Provision of flat hook must be made over manhole cover for future use. m) AAI CNS should be marked over the top of manhole cover.	
16	SUPPLY INSTALL TESTING & COMMISSIONING OF WORK a) All materials, machinery, transportation vehicle, tools, etc required for the above works are to be supplied by the contractor. b) Water & electrical supply should be provided by contractor during the job. c) Warranty of all the materials for SI no. 1 to 12 & 14 will be of minimum 01 years or as offered by the manufacturer whichever is more, commencing from "Commissioning Date. Warranty document all the materials for (SI no. 1 to 12 & 14) need to be submitted after execution of work to AAI. d) OTDR test report of each core of OFC need to be submitted. e) GPR report (one colour hard copy & soft copy) require. f) SLD report of proposed route must be given after execution of complete work within 45 days from the mentioned effective date in work order. g) HDD process must be done properly without damaging the AAI sub surface utility (below ground level) in entire route. If during excavation of pits & HDD process any damage of AAI sub surface utility (below ground level) or AAI property, it a responsibility of contractor to repair it to normal position as soon. h) Site Acceptance report (Hard copy) is required after completion of SITC work within 50 days.	01
17	STORES, MATERIALS AND EQUIPMENTS & MACHINERIES a) No storage accommodation will be arranged by AAI, Contractor shall make all such arrangements at his own cost to the satisfaction of AAI officials. b) All the stores, materials including Cement and Bitumen, etc. equipment's and machinery required for the satisfactory completion of the works, shall be arranged by contractor from his own sources / open market. No claim whatsoever shall be entertained by the AAI on account of delay in either in providing the materials, arranging for plant, equipment's and machinery or non-availability of the materials or equipment's in the market. No Materials etc. shall be issued by AAI.	
18	OEM certificate indicating that the product proposed have an expected life of at least (15) fifteen years for OFC .	

11 POST INSTALLATION ACCEPTANCE TESTING/INSPECTION:

The testing/inspection shall be performed after the completion of installation. The inspectors shall verify the component level details during this testing and shall sign the installation report after completion of the post installation testing. Defects/shortcomings brought out in this testing shall have to be attended as per the contract within the permitted time schedule.

12 BILLING AND SHIPPING ADDRESS:

- a) General Manager (CNS), Kolkata, Airports Authority of India, ATS Complex, NSCBI Airport, Kolkata-700052.
- b) CNS Store, Store Complex, O/o General Manager (CNS) Kolkata, Airports Authority of India, NSCBI Airport, Kolkata-700052 (Near Airport gate no. 2, Glass house, operational office building of AAI).

13 PATENTS, LIABILITY & COMPLIANCE OF REGULATIONS:

- a) Contractor shall also protect and fully indemnify AAI from any claims from contractor firm's workmen/employees, their heirs, dependents, representatives etc. or from any other person (s) or bodies/companies etc. for any act of commission or omission while executing the order.
- b) Contractor shall be responsible for compliance with all requirements under the Indian & International laws and shall protect and indemnify AAI completely from any claims/penalties arising out of any infringements by contractor firm or its workmen/employees.

14 PACKING AND MARKING FOR SUPPLIES REQUIRING AAI ASSISTANCE & HANDLING:

- a) All packing shall be strong enough to withstand rough handling during loading, unloading and transporting of the packages. Fragile articles shall be packed with special precaution and shall bear the marking like 'Fragile', 'Handle with care' and 'This Side Up' etc.
- b) All delicate surfaces of goods shall be carefully protected and painted with protective paint/compound and wrapped to prevent rusting and damage.
- c) Wherever required material shall be packed in polyethylene bags and silica gel or similar dehydrating compound shall be put inside the bags to protect the material. The contractor firm shall be held liable for all damages or breakage of the goods attributable to defective or insufficient packing as well as for corruptions due to insufficient protection.
- d) On three sides and top of package, markings as desired by AAI, shall be provided with indelible paint.

15 TERMINATION OF INSOLVENCY:

The AAI may at any time terminate the Contract by giving written notice to the supplier, without compensation to the Contract, if the Contractor becomes bankrupt or otherwise insolvent as declared by the competent court provided that such termination will not prejudice or affect any right or action or remedy which has accrued or will secure thereafter to AAI. In the event of termination, a penalty to the contractor the AAI shall en-cash Contract Performance Bank Guarantee. The AAI in such case shall pay for the assessed value of the executed work that can be used. No payment shall be made for the efforts put in by the contractor in case the same are of no value to AAI. The balance unfinished work of the project will be got done by fresh tendering on contractor's risk and that extra expenditure will be recovered.

16 Other Term & Conditions:

- 14.1 This letter of award of the work shall form a part of the contract and all terms & conditions mentioned in AAI E-Tender No. **E R - 1 1 0 2 0 (1 9) / 6 / 2 0 2 0 - C N S - E R** (Tender Id: 2020_AAI_59975_1) published in website www.etenders.gov.in shall be applicable on this contract / Work Order and shall remain unchanged and binding to both the parties i.e. AAI and **M/s. R.R. Gupta Steel Industries.**
- 16.1 **M/s. R.R. Gupta Steel Industries** is required to enter into an agreement to be signed on Rs.100/- non-judicial stamp paper (to be stamped in accordance with stamp act) with Airports Authority of India within **15** days from the Effective Date. The format of the agreement is enclosed as "**Annexure-I**" of this letter awarding work.
- 17 AAI GSTN is: **19AAACA6412D1Z5.**
- 18 A duplicate copy of this award letter is enclosed herewith, which may be returned duly signed in each page, to this office as a token of your acceptance.
- 19 Please acknowledge the receipt of this letter.



के.के. साहा/ K.K.SAHA

उप महाप्रबंधक(सीएनएस) भा.वि.प्रा /DGM (CNS) ,

भारतीय विमानपत्तन प्राधिकरण / Airports Authority of India

एन.एस. सी. वि.आई.हवाई अड्डा, कोलकाता/N.S.C.B.I.AIRPORT,KOLKATA.

Encl: As mentioned above.

Copy to:-

- 1) GM(CNS)KOLKATA
- 2) GM(ENGG-PROJECT) NEW AIR TRAFFIC BUILDING
- 3) GM(ENGG-CIVIL) METRO
- 4) GM(ENGG-ELECTRICAL) METRO
- 5) OIC OLD REMOTE
- 6) CMU
- 7) AMSS