



भारतीय विमानपत्तन प्राधिकरण
Airports Authority of India



कार्यालय - महाप्रबंधक (वायु यातायात प्रबंधन) / समन्वयन प्रभारी
O/o - General Manager (ATM)/CIC
डॉ० बाबासाहेब अम्बेडकर अंतरराष्ट्रीय विमानपत्तन, नागपुर
Dr. Babasaheb Ambedkar International Airport, Nagpur

भाविप्रा/नाग/अभि-वि/2021-22/10/MSSR/काआ-01/
AAI/NGP/Engg-E/2021-22/10/MSSR/WO-01/

दि: 27.04.2022
Dt.: 27.04.2022

कायदेश / Award Letter

सेवा में,
मेसर्स वी. आर. एसोशिएट्स,
आनंद टाकीज के सामने, सीताबुर्डी,
नागपुर - 440012.

M/s V. R. Associates,
Opp. Anand Talkies, Sitabuldi,
Nagpur-440012.

विषय: डॉ.बा.अ.अ. हवाई अड्डा, नागपुर में एसआर-एमएसएसआर भवन का निर्माण। उपशीर्ष: विद्युत आपूर्ति कार्य. (Tender ID: 2022_AAI_110786_1).

Sub: Construction of ASR-MSSR Building at DBAI Airport, Nagpur. SH: Power Supply Work. (Tender ID: 2022_AAI_110786_1).

संदर्भ: 1) आपकी दिनांक 22.04.2022 को खोली गई ई-निविदा.

Ref.: 1) Your e-tender Opened on 22.04.2022.

महोदय / Dear Sir(s),

- उल्लिखित कार्य हेतु आपकी निविदा के संबंध में, आपके द्वारा दिए गए मद मूल्यों पर आपकी निविदा राशि कुल ₹ 52,95,200/- (जीएसटी अतिरिक्त जैसे लागू हो) (रुपये बावन लाख पंचानवे हजार दो सौ मात्र), जो कि निविदा की अनुमानित लागत राशि ₹ 63,44,643/- (रुपये तिरसठ लाख चवालीस हजार छह सौ तैंतालीस मात्र) से 16.54% कम है, को अध्यक्ष, भारतीय विमानपत्तन प्राधिकरण की ओर से स्वीकृत किया जाता है।
Your tender for the mentioned above work is hereby accepted on behalf of the Chairman, Airports Authority of India at the item rates quoted by you totaling to ₹ 52,95,200/- (plus GST extra as applicable) (Rupees Fifty-Two Lakhs Ninety-Five Thousand Two Hundred only), which is 16.54% below the estimated cost put to tender of ₹ 63,44,643/- (Rupees Sixty-Three Lakhs Forty-Four Thousand Six Hundred & Forty-Three Only).
- सहा. महाप्रबंधक (अभि-वि), भाविप्रा, डॉ.बा.अ.अ. हवाईअड्डा, नागपुर कार्य के प्रभारी अभियंता होंगे. आपसे निवेदन है कि आप / आप की ओर से एक अधिकृत प्रतिनिधि प्रतिनियुक्त करें जो अनुबंध पर हस्ताक्षर करने के लिए अधिकृत हों, तथा वह दिनांक 11.05.2022 तक सहा. महाप्रबंधक (अभि-वि), भाविप्रा, डॉ.बा.अ.अ. हवाईअड्डा, नागपुर के कार्यालय में उपस्थित हों तथा अनुबंध को पूरा करें. कार्य का अनुबंध ₹ 100/- के नॉन-ज्यूडीशियल स्टैम्प पेपर पर निष्पादित किया जाएगा तथा पेपर का व्यय आपके द्वारा वहन किया जाएगा.
Asstt. General Manager (Engg E), Airports Authority of India, D.B.A.I. Airport, Nagpur shall be Engineer-In-Charge of the work. You / your authorized representative, empowered to sign the contract agreement on your behalf are requested to attend the office of Asstt. General Manager (Engg-E), D.B.A.I. Airport, Nagpur by 11.05.2022 to sign and complete the agreement. The contract agreement shall be executed on a non-judicial stamp paper of value ₹ 100/- (Rupees One hundred only) and the cost of the stamp paper shall be borne by you.
- आपके ई-टेंडर के साथ प्राप्त धरोहर राशि ₹ 1,26,893/- (रुपये एक लाख छब्बीस हजार आठ सौ तिरानवे मात्र) प्रतिभूति जमा राशि में परिवर्तित कर दी गई है। कृपया इस पत्र के जारी होने की तिथि से 10 दिनों के भीतर उर्वरित प्रतिभूति जमा राशि ₹ 4,02,627/- (रुपये चार लाख दो हजार छह सौ सत्ताईस मात्र) जमा करें अन्यथा

27/04/22
सहा. महाप्रबंधक (अभि-वि)
Asstt. Gen. Manager (Engg-E)
भारतीय विमानपत्तन प्राधिकरण,
Airports Authority of India
डॉ. बा. अ. अ. विमानपत्तन प्राधिकरण



भारतीय विमानपत्तन प्राधिकरण
Airports Authority of India



कार्यालय - महाप्रबंधक (वायु यातायात प्रबंधन) / समन्वयन प्रभारी
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डॉ० बाबासाहेब अम्बेडकर अंतरराष्ट्रीय विमानपत्तन, नागपुर
Dr. Babasaheb Ambedkar International Airport, Nagpur

उक्त राशि आपके रनिंग बिलों में से निविदा दस्तावेज के पृष्ठ क्र. 16 पर दी गई शर्त 1(अ) के अनुसार काट ली जाएगी.

The earnest money amount of Rs. 1,26,893/- (Rupees One Lakh Twenty-Six Thousand Eight Hundred & Ninety-Three Only) received along with your e-tender has been converted as part of security deposit as per condition 1(A) on page 16 of tender documents. Please deposit Rs. 4,02,627/- (Rupees Four Lakhs Two Thousand Six Hundred & Twenty-Seven Only) towards Security Deposit within 10 days from the date of issue of this letter, failing which the same will be deducted as per condition of Clause 1 (A) on page 16 of the contract document.

4. आपसे निवेदन है कि आप निविदा दस्तावेज के पृष्ठ क्र. 49 पर दी गई शर्त 19 के अनुसार केन्द्रीय और राज्य सरकारों के अनुबंध श्रम (नियमन तथा उन्मूलन) अधिनियम 1970 तथा अनुबंध श्रम (नियमन तथा उन्मूलन) केन्द्रीय नियम 1971, बालक और कुमार श्रम (प्रतिषेध तथा विनियमन) अधिनियम 1986, भवन एवं अन्य सन्निर्माण कर्मकार (नियोजन और सेवा शर्त विनियमन) अधिनियम 1996, भवन एवं अन्य सन्निर्माण कर्मकार कल्याण उपकर अधिनियम 1996 का अनुपालन करें.

You are requested to comply with the provision of Contract Labour (Regulation and Abolition) Act, 1970 and Contract Labour (Regulation and Abolition) Central Rules 1971, Child Labour (Prohibition & Regulation) Act 1986, Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act 1996, Building and Other Construction Workers Welfare Cess Act 1996 as specified in Clause 19 on page no. 49 of the contract document.

5. आपको निर्देश दिया जाता है कि आप तुरंत सहा. महाप्रबंधक (अभि-वि), भाविप्रा, डॉ.बा.अ.अं. हवाईअड्डा, नागपुर से मिलें जों कि आपको साईट सौंपने की व्यवस्था करेंगे. कृपया नोट कर लें कि काम करने का अनुमत समय 04 (चार) माह है जों कि 06.05.2022 से गिना जाएगा.

You are also directed to contact Asstt. General Manager (Engg-E), Airports Authority of India, D.B.A.I. Airport, Nagpur immediately, who will arrange to hand over the site to you. Please note that the time allowed for carrying out the work is 04 (Four) Months which shall be reckoned from 06.05.2022.

6. इस कार्य के संबंध में आगे का कोई भी पत्राचार सहा. महाप्रबंधक (अभि-वि), भाविप्रा, डॉ.बा.अ.अं. हवाईअड्डा, नागपुर-440005 के पते पर किया जाए.

Any further correspondence in connection with this contract should normally be addressed to the Asstt. General Manager (Engg-E), AAI, D.B.A.I. Airport, Nagpur-440005.

7. निविदा दस्तावेज के पृष्ठ क्र. 154 में दी गई शर्त 33 के अनुसार त्रुटि सुधार दायित्व अवधि 12 (बारह) माह होगी. The defects liability period shall be 12 (Twelve) Months, as mentioned at Clause No. 33 on Page No. 154 of the contract document.

8. कृपया पावती भेजें तथा इस पत्र की प्रतिलिपि हस्ताक्षर कर के अधोहस्ताक्षरी को वापस भेजें.

Please acknowledge the receipt and return the duplicate copy of this letter enclosed herewith after signing it to the undersigned as a token of acceptance.

27/04/22

सहा. महाप्रबंधक (अभि-वि) / Asstt. General Manager (Engg-E)
भाविप्रा, डॉ.बा.अ.अं. हवाईअड्डा, नागपुर / AAI, DBAI Airport, Nagpur.
कृते तथा ओर से, अध्यक्ष / For and on behalf of the Chairman,
भारतीय विमानपत्तन प्राधिकरण / Airports Authority of India.



भारतीय विमानपत्तन प्राधिकरण
Airports Authority of India



कार्यालय - महाप्रबंधक (वायु यातायात प्रबंधन) / समन्वयन प्रभारी
O/o - General Manager (ATM)/CIC
डॉ० बाबासाहेब अम्बेडकर अंतरराष्ट्रीय विमानपत्तन, नागपुर
Dr. Babasaheb Ambedkar International Airport, Nagpur

प्रतिलिपि /Copy to:-
आंतरिक वितरण :-

1. महाप्रबंधक (वायात्र) / समन्वयन प्रभारी, भाविप्रा, डॉ.वा.अ.अ. एअरपोर्ट, नागपुर- 440005.
General Manager (ATM)/CIC, AAI, DBAI Airport, Nagpur-440005.
2. क्षेत्रीय निगरानी अधिकारी, भा.वि.प्रा, पश्चिमी क्षेत्र, सीएसआय एयरपोर्ट, मुंबई - 99.
The Regional Vigilance Officer, AAI, Western Region, C.S.I. Airport, Mumbai-99.
3. संयुक्त-महाप्रबंधक (अभि-वि) - I, भाविप्रा, पश्चिमी क्षेत्र मुख्यालय, न्यू एअरपोर्ट कॉलोनी, विले पार्ले (पूर्व), मुंबई-99.
Jt. General Manager (Engg-E) - I, AAI, Western Region Headquarters, New Airport Colony, Vile Parle (E), Mumbai -99.
4. वरिष्ठ प्रबंधक (वित्त), भाविप्रा, डॉ.वा.अ.अ. एअरपोर्ट, नागपुर-440005
Sr. Manager (Fin), AAI, DBAI Airport, Nagpur-440005.
5. करारनामा कॉपी.
Agreement copy.
6. सम्बंधित फाइल.
Concerned file.

बाह्य वितरण :-

7. सहा. श्रम आयुक्त (केंद्रीय) -II, पहला माला, ब्लॉक-सी, सीजीओ कॉम्प्लेक्स, सेमीनरी हिल्स, नागपुर-06.
The Assistant Labour Commissioner (C) -II, 1st floor, Block 'C', CGO Complex, Seminary Hills, Nagpur-06.
8. क्षेत्रीय भविष्य निधि आयुक्त, भांडे प्लाट, उमरेड रोड, शीतला माता मंदिर के पास, नागपुर.
The Regional Provident Fund Commissioner, Bhande Plot, Umred Road, Near Shitala Mata Mandir, Nagpur.
9. सर्विस टैक्स सेल, ऑ/ऑ उप आयुक्त, सेंट्रल एक्साईस और कस्टम केन्द्रीय उत्पाद भवन सीमा शुल्क भवन, पो. बॉक्स नं. 81, तेलखेडी रोड, सिविल लाईन्स, नागपुर.
Service Tax Cell, O/o Dy. Commissioner of Central Excise & Customs Kendriya UTPAD Bhavan, Seema Shulk Bhavan, P. O. Box No. 81, Telangkhedhi Road, Civil Lines, Nagpur.
10. निदेशक, उप क्षेत्रीय कार्यालय, कर्मचारी राज्य बीमा निगम, पंचदीप भवन, गणेशपेठ, नागपुर - 440018.
Director, Sub Regional Office, Employee's State Insurance Corporation, Panchdeep Bhavan, Ganeshpeth, Nagpur-440018.

सहा. महाप्रबंधक (अभि-वि) / Asstt. General Manager (Engg-E)
भाविप्रा, डॉ.वा.अ.अ. हवाईअड्डा, नागपुर / AAI, DBAI Airport, Nagpur.
कृते तथा ओर से, अध्यक्ष / For and on behalf of the Chairman,
भारतीय विमानपत्तन प्राधिकरण / Airports Authority of India.

 27/04/22

Name of Work :- Construction of ASR-MSSR Building at DBAI Airport, Nagpur. SH: Power Supply Work.

SCHEDULE OF QUANTITY

ITEM No.	DESCRIPTION OF ITEMS	UNIT	QNTTY.	RATE	AMOUNT (Rs.)
1	Supply of following solid / stranded Aluminium conductor, XLPE insulated, PVC inner sheathed, armoured power cable of 1.1 KV grade as per IS-7958 (Part 1)-1988 with up to date amendments of approved make & as per technical specifications etc. complete as required.				
1.01	3.5 core X 240 sq.mm.	Metre	1100.00	1225.00	1347500.00
1.02	3.5 core X 150 sq.mm.	Metre	260.00	750.00	195000.00
2	Supplying and laying of 120 mm size (OD-120 mm & ID-103 mm nominal) DWC HDPE pipe ISI marked along with all accessories like socket, bend, couplers, end caps etc. conforming to IS-16205, Part 24 complete with fitting and cutting, jointing etc. direct in ground (75 cm below ground level) including excavation and refilling the trench but excluding sand cushioning and protective covering etc., complete as required.	Metre	1010.00	200.00	202000.00
3	Supply and laying 140 mm, PN 6, HDPE PE 63 grade size HDPE pipe using Horizontal Directional Drilling (HDD) method for cable diversion including jointing of HDPE pipe, arrangement & mobilization of all machinery, tools & pit excavation etc. as required.	Metre	80.00	3000.00	240000.00
4	Providing, laying and fixing 150 dia G.I. pipe (medium class) in ground complete with G.I. fittings including trenching (75 cm deep) and refilling etc as required.	Metre	42.00	2000.00	84000.00
5	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of Above 185 sq. mm and up to 400 sq. mm size in the existing RCC / HUME / METAL/DWC pipe as required.	Metre	1100.00	50.00	55000.00
6	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of above 185 sq. mm and up to 400 sq. mm size in the existing masonry open duct as required.	Metre	95.00	50.00	4750.00
7	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of above 95 sq. mm and up to 185 sq. mm size in the existing masonry open duct as required.	Metre	200.00	50.00	10000.00
8	Supplying and making end termination with brass compression gland and Aluminium lugs for 3.5 core X 240 sq.mm. size of PVC insulated and PVC sheathed / XLPE Aluminium conductor cable of 1.1 KV grade as required.	Nos.	8.00	500.00	4000.00
9	Supplying and making end termination with brass compression gland and Aluminium lugs for 3.5 core X 150 sq.mm. size of PVC insulated and PVC sheathed / XLPE Aluminium conductor cable of 1.1 KV grade as required.	Nos.	24.00	250.00	6000.00
10	Earthing with G.I. earth plate 600 mm X 600 mm X 6 mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 metre long etc. with charcoal / coke and salt as required.	Nos.	4.00	5000.00	20000.00
11	Earthing with Copper earth plate 600 mm X 600 mm X 3 mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 metre long etc. with charcoal / coke and salt as required.	Nos.	4.00	12500.00	50000.00
12	Providing and fixing 25 mm X 5 mm Copper strip in 40 mm dia G.I. pipe from earth electrode including connection with brass nut, bolt, spring, washer excavation and re-filling etc. as required.	Metre	89.00	1500.00	133500.00
13	Providing and fixing 25 mm X 5 mm GI strip in 40 mm dia G.I. pipe from earth electrode including connection with brass nut, bolt, spring, washer excavation and re-filling etc. as required.	Metre	89.00	500.00	44500.00
14	Providing and fixing 25 mm X 5 mm Copper strip on surface or in recess for connect ions etc. as required.	Metre	30.00	1000.00	30000.00
15	Providing and fixing 25 mm X 5 mm GI strip on surface or in recess for connect ions etc. as required.	Metre	35.00	100.00	3500.00
16	Extra for excavation of the cable trenches in hard rock / PCC / Bituminous not exceeding 1.5 metres in width, and lift up to 1.5 metres, including getting out the excavated soil and disposal of excavated soil as directed within a lead of 50 metres.	Cum	24.00	500.00	12000.00

ITEM No.	DESCRIPTION OF ITEMS	UNIT	QNTTY.	RATE	AMOUNT (Rs.)
17	Providing and laying in position cement concrete of specified grade excluding the cost of centering, shuttering - All work up to plinth level : 1:2:4 (1 cement : 2 coarse sand(zone-III) : 4 graded stone aggregate 20 mm nominal size)	Cum	5.03	4906.00	24530.00
18.01	Supply, Installation, Testing & Commissioning of Silent Type Diesel Generating set along with prime power rating of 180 KVA, 415 Volts at 1500 RPM, 0.8 lagging power factor at 415 V suitable for 50 Hz., 3-Phase system and consisting of the followings: a) Diesel Engine: Radiator cooled Diesel Engine of suitable BHP (not less than 234 BHP) at 1500 RPM after considering derating factors as applicable, 4 Stroke, turbo charged - after / inter cooled with charged air cooling, vacuum indicator, electronic / mechanical governor, electric start, suitable for above output of a ternator at 47.7 Deg.C, 30-80% RH & at 306 Metres MSL and conforming to ISO 3046 / IS 10000, capable of taking 10% over loading for one hour after 12 hours of continuous operation. The engine shall be fitted completed with all the required accessories & shall be provided with 1st fill of lube oil and coolant. b) Engine Mounted Control Panel - Fitted with Microprocessor based Genset Controller having digital display & control devices for safety and monitoring along with indicators as below: Start-Stop switch with key, coolant temperature high/low indication, lubrication oil pressure indication, battery charging indication, RPM indication, over speed indication, low lube oil pressure trip indication, engine run hours indicat ion etc. c) Alternator: Synchronous alternator rated at 180 KVA (Minimum), 415 Volts at 1500 RPM, 3-Phase 50 Hz., AC Supply with 0.8 lagging power factor at 47.7 Deg.C, 30-80% RH & at 306 Metres MSL. The alternator shall be having SPDP enclosure, brushless, continuous duty, self-excited and self-regulated through AVR/DVR conforming to IS 4722 / BS 2613 suitable for tropical conditions, with adapter box and with class-H insulation. d) Base Frame: Both the engine and alternator shall be mounted on suitable base frame made of MS channel with necessary reinforcement which shall be installed on cement concrete foundation (Will be provided by AAI) and AVM pads / vibration isolation arrangement to be provided as per recommendations of manufacturer. e) Fuel Tank: Calibrated Day Storage fuel tank of 990 Litres capacity fabricated out of 3 mm thick M. S. sheet complete with suitable MS stand, flanged inlet & outlet, overflow, drain, vent, high & low level indicator, 450 mm dia access hole on top with cover & all standard accessories, fuel piping between fuel tank and diesel engine with MS class 'C' pipes of suitable dia. as required as per specifications. (This tank shall be separate from in-built fuel tank of Genset). f) Exhaust System: Dry exhaust manifold with residential / hospital grade exhaust silencer and catalytic convertor with MS support structure for exhaust piping including rope wrapping insulation and aluminium cladding as required. g) Starting System: 12V/24V DC starting system comprising of starter motors: Voltage regulator and arrangement for initial excitation complete with suitable nos. of batteries complete with leads, charger and battery stand etc. as per the OEM standard and as required as per specifications. h) Acoustic Enclosure: Acoustic and weather proof enclosure complying with CPCB-II norms, with arrangement for fresh air intake for cooling of the engine and alternator, extraction, discharging hot air into the atmosphere as per specifications.				
18.02	Diesel Generator Set - 180 KVA as Above. (18.01 to 18.05)	Set	1.00	1110000.00	1110000.00


 Asst. Gen. Manager (Engg-E)
 भारतीय विमानपत्तन प्राधिकरण,
 Airports Authority of India
 ए. आर. अ. प्रा. विमानपत्तन, नएपूर,
 401 001, Mumbai, Maharashtra

ITEM No.	DESCRIPTION OF ITEMS	UNIT	QNTTY.	RATE	AMOUNT (Rs.)
19.01	Fabrication, Supply, Installation, Testing and Commissioning of cubicle type, IP-42 indoor AMF LT panel - type tested assembly (TTA) as per IEC 61439-1&2, floor mounting, free standing, suitable for 415V+/-10%, 3 Phase, 4 wire, 50 Hz AC supply system, fabricated in compartmentalized modular design (Form-4B) from CRCA sheet steel of 1.6 mm thick for frame work and covers, 3 mm thick for gland plates i/c cleaning & finishing complete with 7 tank process for powder coating in approved shade, having 400 A capacity TPN Aluminium alloy bus bars of high conductivity, SMC / DMC bus bar supports, with short circuit withstand capacity of 50 KA for 1 sec, bottom base channel of MS section not less than 100 mm x 50 mm x 5 mm thick, fabrication shall be done in transportable sections, entire panel shall have a common Al. earth bus bar of suitable size at the rear end with 2 Nos. earth stud,				
19.02	solid / flexible connections from main bus bar to switchgear output to cable termination in cable alley with required size of Copper conductors / Aluminium bus bars and control wiring with 2.5 sqmm PVC insulated copper conductor cable (FRLS), cable alleys, cable gland plates in two half, complete with all accessories, interconnection, earthing i/c providing following switchgears / accessories as per specifications: (AMF LT PANEL - SUITABLE FOR 180 KVA DG SET)				
19.03	a) 320 A, 36 KA, 4 Pole MCCB (Ics = 100% Icu), Microprocessor Based Release with O/C & S/C Protection - 2 Sets.				
19.04	b) 315 / 325 A, 4 Pole Power Contactor with Aux. Contacts - 2 Nos.				
19.05	c) 315 A, 4 Pole Bypass Changeover Switch to bypass Mains / DG supply - 01 No.				
19.06	e) Protection Relays - Over Current + Earth Fault, Over Voltage, Under Voltage (Each - 2 Nos.), Reverse Power (1 No.) with CTs of suitable range - 15VA, CL-5F10 accuracy for protection as applicable.				
19.07	f) LED indication lamps for RYB (3 Sets), Load on Mains, Load on DG, DC Control ON, Battery Charger ON etc. with 2 Amp MCB for protection.				
19.08	g) Intelligent Digital Multi Function Meter to read V, A, kVA, kW, kVAR, PF, Hz, THD and individual order harmonics up to 31st Order etc. with communication facility (RS-485 port), CL-1.0, LED display - 2 Nos. + Digital Ammeter, RS 485, CL-1.0, with in-built selector switch with 2 Amps MCBs for controlling and protection - 2 Nos. + 3 Nos. CTs, 300/5, 15 VA, Class 1.0 and control circuit wiring with 2 Amps MCBs for controlling and protection.				
19.09	h) Microprocessor Based Advanced AMF Control Logic Relay with Built-in DG Protection - 1 No.				
19.10	i) 12/24 V DC Control Circuit, Voltage Monitoring Relay (2 Nos), Cranking Relay, Engine Starting Relay, Aux. Relays, Timers, Aux. Contactors, Selector Switches, Push Buttons, Emergency Stop Push Button, 2 A Control MCBs as required for control / interlocking / protection & Accessories etc. as required. - 1 Set.				
19.11	j) 24 VDC Battery Charger, complete with transformer / rectifier, DC Voltmeter and DC Ammeter, Selector Switch for Trickle / Off / Boost with current adjustment - 1 Set				
19.12	k) 8 Window Annunciator with Push Button for Test/Accept/Reset + Hooter for indication of High Water Temperature, High/Low Lube Oil Pressure, Engine Overspeed, Engine Failure to Start, Over Current, Under / Over Voltage, Reverse Power & Earth Fault Etc. as required. - 1 Set				
19.13	l) Control Cabling with 10C x 2.5 Sqmm Cu. Arm. Cable between AMF Panel and DG Set Control Unit as required.				
19.14	NOTE: All MCCBs shall be provided with rotary operating handle and spreader terminals.				
19.15	AMF LT PANEL - (SUITABLE FOR 180 KVA DG SET) AS ABOVE - 19.01 TO 19.15	Set	1.00	600000.00	600000.00
20.01	Fabrication, Supply, Installation, Testing and Commissioning of cubicle type, IP-42, indoor LT panel as per IS 8623-Part-1, floor mounting, free standing, suitable for 415V+/-10%, 3 Phase, 4 wire, 50 Hz AC supply system, fabricated in compartmentalized modular design from CRCA sheet steel of 1.6 mm thick for frame work and covers, 3 mm thick for gland plates i/c cleaning & finishing complete with 7 tank process for powder coating in approved shade, TPN Aluminium alloy bus bars of high conductivity, extensible on both sides, SMC / DMC bus bar supports, with short circuit withstand capacity of 50 KA for 1 sec, bottom base channel of MS section not less than 100 mm x 50 mm x 5 mm thick, fabrication done in transportable sections, entire panel shall have a common Al. earth bus bar of suitable size, at the rear end with 2 Nos. earth stud,				

ITEM No.	DESCRIPTION OF ITEMS	UNIT	QNTTY.	RATE	AMOUNT (Rs.)
20.02	solid / flexible connections from main bus bar to switchgears and from switchgear output to cable termination in cable alley with required size of Copper conductors / Aluminium bus bars and control wiring with 2.5 sqmm PVC insulated copper conductor cable (FRLS), cable alleys, cable gland plates in two half, complete with all accessories, interconnection, interlocking, earthing i/c providing following switchgears / accessories as per specifications.: (ESSENTIAL LT PANEL)				
20.03	A) Incomers & Bus coupler:				
20.04	(a) 250 A, 36 kA, 4 Pole MCCB (Ics = 100% Icu), Microprocessor Based Release with O/C & S/C Protection - 3 Sets (Incomer - 2 Nos. & Bus-Coupler - 1 No.)				
20.05	b) Intelligent Digital Multi Function Meter to read V, A, kVA, KW, KVAR, PF, Hz, THD and individual order harmonics up to 31st Order etc. with communication facility (RS-485 port), CL-1.0, LED display with 03 Nos of CTs, 250/5, 15 VA, Class 1.0 and control circuit wiring with 2 Amps MCBs for controlling and protection. - 2 Sets.				
20.06	c) R, Y, B Phase indicating lamps, LED type, with 2 Amp MCB for protection. - 3 Sets.				
20.07	d) 1 Set of Indication Lamps, LED type for MCCB 'ON', 'OFF', 'TRIP' with 02 Amps MCB for protection - 3 Sets.				
20.07	e) Auxiliary contacts / contactors, auxiliary relays, shunt trip etc. for positive interlocking of the incomer MCCBs and bus coupler MCCB as required. - 1 Set.				
20.08	B) Main Busbars:				
	TPN, high conductivity Aluminium, both sides extensible type main bus bars of minimum of 300 Amps. capacity with heat shrinkable coloured sleeves and i/c DMC / SMC bus bars cross section supports & their spacing etc. For withstanding fault level of 50 kA capacity for 1 sec. - 1 Set				
20.09	C) Outgoings:				
20.10	(a) 125 A, 36 kA, Four Pole MCCB (Ics = 100% Icu) with O/L and S/C Fault Protection with Adjustable Thermal and Adjustable Magnetic Releases + Digital Ammeter with in-built selector switch, RS 485, CL-1 accuracy & suitable range of cast resin CTs (03 Nos) including connections etc as required. - 2 Sets.				
20.11	(b) 100 A, 36 kA, Four Pole MCCB (Ics = 100% Icu) with O/L and S/C Fault Protection with Adjustable Thermal and Adjustable Magnetic Releases + Digital Ammeter with in-built selector switch, RS 485, CL-1 accuracy & suitable range of cast resin CTs (03 Nos) including connections etc as required. - 6 Sets.				
20.12	(c) 63 A, 36 kA, Four Pole MCCB (Ics = 100% Icu) with O/L and S/C Fault Protection with Adjustable Thermal and Adjustable Magnetic Releases + Digital Ammeter with in-built selector switch, RS 485, CL-1 accuracy & suitable range of cast resin CTs (03 Nos) including connections etc as required. - 2 Sets.				
20.13	NOTE:				
	a) All MCCBs shall be provided with ON, OFF & TRIP indication lamps (LED type) with 2 Amp SP MCB for protection.				
	b) All MCCBs shall be provided with rotary operating handle and spreader terminals.				
20.14	ESSENTIAL LT PANEL AS ABOVE - 20.01 to 20.14	Set	1.00	400000.00	400000.00
21.01	Fabrication, Supply, installation, Testing and Commissioning of cubicle type, IP-42, indoor LT panel - type tested assembly (TTA) as per IEC 61439-1&2, floor mounting, free standing, suitable for 415V+/-10%, 3 Phase, 4 wire, 50 Hz AC supply system, fabricated in compartmentalized modular design (Form-4B) from CRCA sheet steel of 1.6 mm thick for frame work and covers, 3 mm thick for gland plates i/c cleaning & finishing complete with 7 tank process for powder coating in approved shade, TPN Aluminium alloy bus bars of high conductivity, extensible on both sides, SMC / DMC bus bar supports, with short circuit withstand capacity of 50 KA for 1 sec, bottom base channel of MS section not less than 100 mm x 50 mm x 5 mm thick, fabrication done in transportable sections, entire panel shall have a common Al. earth bus bar of suitable size, at the rear end with 2 Nos. earth stud.				
21.02	solid / flexible connections from main bus bar to switchgears and from switchgear output to cable termination in cable alley with required size of Copper conductors / Aluminium bus bars and control wiring with 2.5 sqmm PVC insulated copper conductor cable (FRLS), cable alleys, cable gland plates in two half, complete with all accessories, interconnection, interlocking, earthing i/c providing following switchgears / accessories as per specifications.: (NON-ESSENTIAL LT PANEL)				

ITEM No.	DESCRIPTION OF ITEMS	UNIT	QNTTY.	RATE	AMOUNT (Rs.)
21.03	A) Incomers & Bus coupler:				
21.04	(a) 400 A, 36 kA, Four Pole MCCB (Ics = 100% Icu), Microprocessor Based Release with O/L & S/C Protection - 3 Sets (Incomer - 2 Nos. & Bus Coupler - 1 No.)				
21.05	b) Intelligent Digital Multi Function Meter to read V, A, kVA, KW, kVAR, PF, Hz, THD and individual order harmonics up to 31st Order etc. with communication facility (RS-485 port), CL-1.0, LED display with 03 Nos of CTs, 400/5, 15 VA, Class 1.0 and control circuit wiring with 2 Amps MCCBs for controlling and protection. - 2 Sets.				
21.06	c) R, V, B Phase indicating lamps, LED type, with 2 Amp MCB for protection. - 3 Sets.				
21.07	d) 1 Set of Indication Lamps, LED type for MCCB 'ON', 'OFF', 'TRIP' with 02 Amps MCB for protection - 3 Sets.				
	d) Auxiliary contacts / contactors, auxiliary relays, shunt trip etc. for positive interlocking of the incomer MCCBs and bus coupler MCCB as required. - 1 Set.				
21.08	(e) 3 Phase 4 Wire kWh Meter, CT op base mounting, Class accuracy 0.5s (Neptune or similar) with 03 Nos of CTs, 400/5, 15 VA, Class 1.0 - 2 Sets.				
21.09	f) Surge Protection Device - Type 1+2, 3 Pole + NPE, I _{max} = 50 kA, Modular Type, conforming to EN/IEC 61643-11 with 32A, FP C-Series MCB including complete connection with copper flexible cable and as per technical specifications. (OBO - V50-3+NPE-320 / L&T AUSP123PN50 or similar) - 2 Sets				
21.10	B) Main Busbars: TPN, high conductivity Aluminium, both sides extensible type main bus bars of minimum of 400 Amps. capacity with heat shrinkable coloured sleeves and i/c DMC / SMC bus bars cross section supports & their spacing etc. For withstanding fault level of 50 kA capacity for 1 sec. - 1 Set				
21.11	C) Outgoings:				
21.12	(a) 250 A, 36 kA, 4 Pole MCCB (Ics = 100% Icu), Microprocessor Based Release with O/C & S/C Protection + Digital Ammeter with in-built selector switch, RS 485, CL-1 accuracy & suitable range of cast resin CTs (03 Nos) including connect ions etc as required. - 2 Set s.				
21.13	(b) 100 A, 36 kA, Four Pole MCCB (Ics = 100% Icu) with O/L and S/C Fault Protection with Adjustable Thermal and Adjustable Magnetic Releases + Digital Ammeter with in-built selector switch, RS 485, CL-1 accuracy & suitable range of cast resin CTs (03 Nos) Including connections etc as required. - 2 Sets.				
21.14	NOTE: a) All MCCBs shall be provided with ON, OFF & TRIP indication lamps (LED type) with 2 Amp SP MCB for protection. b) All MCCBs shall be provided with rotary operating handle and spreader terminals.				
21.15	NON-ESSENTIAL LT PANEL AS ABOVE - 21.01 to 21.15	Set	1.00	475000.00	475000.00
22	Supply & Installation of 8 mm dia Aluminium Alloy Round Conductor for air termination network & down conductor system meeting the requirements of IS/IEC 62305 and IEC 62561: complete as per technical specifications as required. (OBO Type No. RD 8/ALU-I (5450 08 6) / CAPE Type SRC 8-AL (400 008) or Similar)	Metre	210.00	115.00	24150.00
23	Providing & fixing cross connector for T and cross connection, to route vertical down conductor / mesh formation, made of hot dipped Galvanised Iron / Stainless Steel with necessary bolts and nuts etc. meeting the requirements of IS/IEC 62305 and IEC 62561 complete as per technical specifications as required. (OBO Type No. 251 8-10 (5312 03 5) / CAPE Type: CCS 8-10 (400 206) or Similar)	Nos.	13.00	235.00	3055.00
24	Providing & fixing of roof conductor holder for tiled / slated / corrugated roof sheet, suitable for 8 mm dia round conductor, made up of UV resistant Nylon / PU / Polyamide complete as per technical specifications as required. (OBO Type No. 159 K-VA (5216 81 8) / or Similar)	Nos.	40.00	150.00	6000.00
25	Providing & fixing of roof conductor holder for parapet wall, suitable for 8 mm dia round conductor, made up of UV resistant Nylon / PU / Polyamide complete as per technical specifications as required. (OBO Type No. 177 30 M8 (5207 46 0) / CAPE Type PCH 8 (400 202) or Similar)	Nos.	167.00	45.00	7515.00

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Airports Authority of India
ए. आ. अ. प्र. विमानपत्तन प्राधिकरण

ITEM No.	DESCRIPTION OF ITEMS	UNIT	QNTTY.	RATE	AMOUNT (Rs.)
26	Providing & fixing of roof conductor holder for flat roof, suitable for 8 mm dia round conductor, made up of UV resistant Nylon / PU / Polyamide with concrete block / filling complete as per technical specifications as required. (OBO Type No. 165 MBG-8 (5218 70 0) / CAPE Type MBPCH 8 (403 201) or Similar)	Nos.	3.00	175.00	525.00
27	Providing & fixing of expansion connectors (2 nos / expansion piece) for equalising temperature related length changes, suitable for 8 mm dia round conductor, meeting the requirements of IS/IEC 62305 and IEC 62561 complete as per technical specifications as required. (OBO Type No. 172 AR (5218 92 6) + 249 8-10 ST (5311 50 0) / CAPE Type EPC 8 (401 209) + CJ 8 (401 211) or Similar)	Set	3.00	575.00	1725.00
28	Providing & fixing 16 Sqmm flexible bridging Copper cable with UV stabilized chlorinated natural rubber mixture coating, Aluminium lugs, suitable for indoor & outdoor application, installed to make continuity at air terminals including providing & fixing 8 mm clamping shoe (2 Nos.) complete as per technical specifications as required. (OBO Type No. 853 300 (5331 01 3) with 319 8 Clamping Shoe, 8 mm (5325 307) or similar)	Set	1.00	1500.00	1500.00
29	Supply & Installation of 1 metre long, 10 mm dia Aluminium vertical air termination rod along with mounting accessories to install on the flat surface, meeting the requirements of IS/IEC 62305 and IEC 62561 complete as per technical specifications as required. (OBO Type No. F FIX-JUNIOR (5403 30 8) or / CAPE Type VAT 1 (400 410) or similar)	Nos.	1.00	1000.00	1000.00
30	Providing & fixing of Test Joint (Folding Clamp), suitable to connect 8 mm round conductor and 50 X 5 mm GI strip, made up of Cu. / Stainless steel / Galvanized Iron, meeting the requirements of IS/IEC 62305 and IEC 62561 complete as per technical specifications as required. (OBO Type No. 271 8-13 VA (5317 48 1) or Similar)	Nos.	6.00	1000.00	6000.00
31	Supply & Installation of hot dipped galvanized steel flat strip of 25 x 5 mm thickness with Zinc coating (500 Gms /Sqm or 70 microns) for ring equipotential bonding and connecting earthing system with down conductor system meeting the requirements of IS/IEC 62305 and IEC 62561 complete as per technical specifications as required. (OBO Type No. 5052 25x6 GI (5450 43 1) or Similar)	Metre	140.00	290.00	40600.00
32	Providing & fixing of Cross connector for flat strip, suitable for 30 mm Galvanized steel strip, made up of Stainless steel / Galvanized Iron, with 4 Nos. of hexagonal bolts complete as per technical specifications as required. (OBO Type No. 255 FL30 FT (5314 53 4) or Similar)	Nos.	20.00	205.00	4100.00
33	Supply & Installation of UL Listed, maintenance free earthing, comprising: (1) 17.2 mm dia low carbon copper bonded steel earth electrode of 3 metre length with copper coating thickness of 250 microns (OBO Type No. 17 3000 CCEP (5450 01 4) or Similar); (2) Universal clamp made up of stainless steel to connect earth rod with flat conductor (OBO Type No. 17 25 RTC (5450 06 8) or Similar) (3) Earth conductivity enhancing mineral compound tested for leaching & TCLP - 25 Kg (OBO Type No. OEC 2 25 (5450 05 8) or Similar) (4) Heavy duty earth chamber / inspection pit (OBO Type No. UFE (5450 03 0) or Similar) All materials as above meeting the requirements of IS/IEC 62305 and IEC 62561 complete as per technical specifications as required.	Set	6.00	8000.00	48000.00
34.01	Supply, installation, testing and commissioning outdoor feeder pillar box of minimum size 450 X 450 X 300 mm depth, suitable for operation on 415V, 3 phase, 4 wire 50Hz AC supply system, fabricated in totally enclosed, free standing, non-extensible, IP-65 rated design from CRCA sheet steel of 2 mm thick for frame work and covers, 3 mm thick for gland plates, complete with 50 kA for 1 Sec rated 200 Amps current capacity Aluminium Bus-bars, hinged front & back door opening & locking arrangement, painted/powder coated with one coat of red oxide & two coats of enamel paint, suitable openings at the bottom for cable entries, earthing bolts etc.				
34.02	The box shall be mounted on MS angle stand to be grouted in 1:2:4 concrete of 100 X 100 X 300 mm depth, providing & laying in position cement concrete (PCC) of specified grade around the feeder panel boxes (PCC Size 1Mtr X 1 Mtr X 0.25 Mtr) (1:2:4) (1 cement: 2 coarse sand: 4 graded stone aggregate 40mm nominal size) with Suitable HDPE pipe for cable in & out to the boxes, etc. as per technical specifications as required.				
34.03	FEEDER PILLAR AS ABOVE - 34.01 to 34.03	Job	2.00	10000.00	20000.00
35	Supply of nominal 2.0 mm +/- 10 % thick electrically insulated synthetic mat conforming to IS 15652:2006 & suitable for all voltages up to 3.3 KV etc. complete as required.	Sqm	30.00	475.00	14250.00
36	ITC of nominal 2.0 +/- 10 % thick electrically insulated synthetic mat along with suitable adhesive / chemibound / PU resin, sealing material etc. as required.	Sqm	30.00	100.00	3000.00

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AGM (E-E)

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