



सं. संख्या : भाविप्रा/सोलापुर/(अभि-वी)/320 KVA DG/CW-05/2023-24/ दिनांक: 12.03.2024

सेवा में,
मे. वर्टस टेक्नो
✓ क्रमांक 52/5, संख्या-301,
वसंतसखा प्लाजा, नवले ब्रिज के पास,
डंगट सिरेमिक हाउस के बगल में, नरहे,
पुणे - 411 041

To,
M/s. Virtus Techno
Sr. No. 52/5, off. No.-301,
Vasantsakha Plaza, Near Navle Bridge,
Next to Dangat Ceramic House, Narhe,
Pune - 411 041

विषय : सोलापुर हवाई अड्डे का विकास, वीएफआर संचालन के लिए

एसएच:- एस. आई. टी. सी. 02 नो. 320 KVA के डीजी सेट सोलापुर हवाई अड्डे पर के और संबंधित कार्यों।

Sub: Development of Solapur Airport for VFR operations SH :- SITC of 02 Nos.
320 KVA DG Sets & Associated works at Solapur Airport.

संदर्भ / Ref.: 1) आपका ई-टेंडर आय डी. **2024_AAI_180578_1**, वित्तीय बीड

दिनांक: 24.12.2021 को खोला गया |

Your e-tender ID. **2024_AAI_180578_1**, Financial Bid Opened on
24.12.2021.

महोदय/ Dear Sir,

- ऊपर उल्लेखित कार्य हेतु आपका टेंडर अध्यक्ष, भारतीय विमानपत्तन प्राधिकरण की ओर से स्वीकृत किया जाता है, आपके द्वारा बताए गए मद मूल्यों पर आपकी टेंडर राशि जीएसटी रहित कुल रु. 1,46,20,638.00 (एक करोड़ छियालीस लाख बीस हजार छह सौ अड़तीस मात्र) है जो कि टेंडर की अनुमानित लागत राशि रु. 1,75,05,573.00 से 16.48% नीचे 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 Excluding GST totaling to **Rs. 1,46,20,638.00 (One Crore Forty-Six Lakh Twenty Thousand Six Hundred Thirty-Eight Only)** which is **16.48%** below the estimated cost put to tender of **Rs. 1,75,05,573.00**
- उप महाप्रबंधक, अभि (विद्युत), भा वि प्रा कोल्हापूर विमान क्षेत्र कार्य के प्रभारी अभियंता होंगे। आपसे निवेदन है कि आप आपकी ओर से एक विश्वसनीय प्रतिनिधि नियुक्ति करें जो करारनामे पर हस्ताक्षर करने के लिए अधिकृत हो तथा वह दिनांक 22.03.2024 तक सहायक महाप्रबंधक, अभि(विद्युत), कोल्हापूर एयरपोर्ट के कार्यालय में उपस्थित हो तथा करारनामे को पूरा करें। ठेके का करारनामा रु. 100/- गैर न्यायिक स्टैम्प पेपर पर निष्पादित किया जाएगा तथा पेपर का खर्च आपके द्वारा उठाया जायगा।

Bidyut

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बिद्युत राय / Bidyut Roy
सहा. महाप्रबंधक (अभि.विद्युत)
Asst. Gen. Manager (Engg-E)
भा. वि. प्रा. कोल्हापूर हवाई अड्डा, कोल्हापूर
A. A. I. Kolhapur Airport, Kolhapur

2. Dy. General Manager (Engg-E), AAI, Kolhapur Airport 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 Asst. General Manager (Engg-E), AAI, Kolhapur Airport by **22.03.2024** to sign and complete the contract agreement. The contract agreement shall be executed on a non-judicial stamp paper of value **Rs. 100/-** (Rupees One hundred only) and the cost of the stamp paper shall be borne by you.
1. ठेके के दस्तावेज़ के GCC: 12-13 पर दी गई शर्त 1 (ए) के अनुसार जमानत राशि रु. 14,62,064.00 (चौदह लाख बासठ हजार चौसठ मात्र) यह कार्य आदेश जारी होने की तिथि से 10 दिनों के भीतर अदा की जाए अन्यथा ठेके के दस्तावेज़ के GCC: 12-13 पर दी गई शर्त 1(ए) के अनुसार उक्त राशि रनिंग बिल से कटौती की जाएगी।
3. As per condition of Tender document clause No. 1 (A) on page GCC-12 & 13. please deposit **Rs 14,62,064.00 (Rs. Fourteen Lakh Sixty-Two Thousand Sixty Four only)** towards security deposit within 10 days from the date of issue of this work order, failing which the same shall be deducted from your running bill as per condition of Tender document clause No. 1 (A) on page GCC-12 & 13.
2. आपसे निवेदन है कि आप केंद्रीय और राज्य सरकारों 1970 के अधिनियम अनुबंध श्रम नियम तथा 1971 के केंद्रीय नियम (नियमन तथा उन्मूलन) एवं केंद्र तथा राज्य सरकार के न्यूनतम वेतन अधिनियम और नियमों के प्रावधान का अनुपालन करें।
4. You are requested to comply with the provisions of contract labour (Regulation and abolition) Act of 1970 and contract labour (Regulation & abolition) Central rules 1971 and minimum wages Act & rules thereof central and state Governments.
5. आपको निर्देश दिया जाता है कि आप तुरंत प्रबंधक (अभि-विद्युत), भाविप्रा, कोल्हापूर विमानक्षेत्र से मिले वह आपको साइट सौंपने की व्यवस्था करेंगे।
5. You are also directed to Contact Manager (Engg-E), AAI, Kolhapur Airport immediately who will arrange to hand over the site to you.
6. कृपया नोट कर लें कि काम पूर्ण करने का अवधि तीन (3) माह है जोकि इस पत्र के जारी करने के बाद दसवे दिन से गिना जायगा।
6. Please note that the time allowed for carrying out the work is **Three (3) months**, which shall be reckoned from the tenth day after issue of this letter.

Bidyut Roy

बिद्युत रॉय / Bidyut Roy
सहा. महाप्रबंधक (अभि.विद्युत)
Asst. Gen. Manager (Engg-E)
भा. वि. प्रा. कोल्हापूर हवाई अड्डा, कोल्हापूर
A. A. I. Kolhapur Airport, Kolhapur

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7. इस ठेके के संबंध में आगे का कोई भी पत्राचार उप. महाप्रबंधक (अभि-विद्युत), भाविप्रा, कोल्हापूर विमानक्षेत्र के पते पर किया जाए।
7. Any further correspondence in connection with the contract should normally be addressed to the Dy. General Manager, AAI, Kolhapur Airport.
8. उपरोक्त संदर्भित सभी पत्र इस ठेके का भाग होंगे।
8. All the letters referred above shall form part of the contract.
9. पत्र को स्वीकार करने के पश्चात नकल प्रति पर हस्ताक्षर करके टोकन के रूप में पुनः भेज दे।
9. 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.
10. यदि अंग्रेजी और हिन्दी पाठ में कोई अंतर पाया जाता है तो अंग्रेजी विवरण सही माना जाएगा।
10. If there is any discrepancy between English and Hindi then meaning derived in English will be given precedence.

धन्यवाद / Thanking You,

भवदीय / Yours faithfully,

Bidyut Roy

सहायक. महाप्रबंधक (अभि-विद्युत)/ Asst. General Manager (Engg-E),
कृते तथा ओर से, अध्यक्ष, भारतीय विमानपत्तन प्राधिकरण,

For and on behalf of Chairman,
Airports Authority of India.

बिद्युत रॉय / Bidyut Roy

सहा. महाप्रबंधक (अभि.विद्युत)

Asst. Gen. Manager (Engg-E)

भा. वि. प्रा. कोल्हापूर हवाई अड्डा, कोल्हापूर
A. A. I. Kolhapur Airport, Kolhapur

संलग्न/Encl: Schedule of Quantity

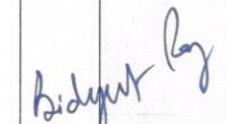
Name of Work : DEVELOPMENT OF SOLAPUR AIRPORT FOR VFR OPERATIONS SH: SITC OF 2 NOS. 320 KVA DG SETS & ASSOCIATED WORKS AT SOLAPUR AIRPORT

Item Rate BoQ

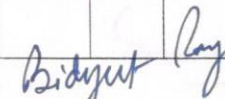
Contract No: 2024_AAI_180578_1

Name of the Bidder/
Bidding M/s Virtus Techno, Pune

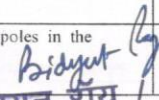
PRICE SCHEDULE (This BOQ template must not be modified/replaced by the bidder and the same should be uploaded after filling the relevant columns, else the bidder is liable to be rejected for this tender. Bidders are allowed to enter the Bidder Name and Values only)								
NUMBER #	TEXT #	TEXT #	NUMBER	TEXT #	TEXT #	NUMBER #	NUMBER #	NUMBER #
Sl. No.	Item Description	Item Code / Make	Quantity	Units	Quoted Currency in INR / Other	BASIC RATE(Excluding GST) In Figures To be entered by the	TOTAL AMOUNT Excluding GST	
1	2	3	4	5	12	13	53	
1	"DIESEL GENERATOR SETS" Design, Supply, Installation, Testing and Commissioning of 'Silent Type' Diesel Generating set (suitable for outdoor installation along with acoustic enclosure) along with having Prime Power Rating 320 KVA, 415 volts at 1500 RPM, 0.8 lagging power factor at 415 V suitable for 50 Hz, 3 phase system & for 0.85 Load Factor, power command control system (Standard Control panel with 630 A, 4P, MCCB with PS0602/PC3.3 including AMF logic or equivalent installed in the acoustic enclosure), cable termination boxes suitable for end terminations of upto 3.5 x 300 Sqmm. cable, first fill of lubricating oil and diesel for testing and commissioning (The DG set shall comply CPCB - IV + norms) and consisting of the followings including providing necessary CEA approval, insurance, Packing, loading, unloading, transportation etc. as required: (a) Diesel Engine: Diesel engine 4 stroke radiator with fan cooled, floor mounted, electric start, of suitable BHP at 1500 RPM suitable for above output of alternator at 40 Degree C, 50% RH & at 1000 Meter MSL and conforming to BS 5514, BS 649, IS 10000, capable of taking 10% over loading for one hour after 12 hours of continuous operation. The engine will be fitted complete with all the required accessories. (b) Engine mounted Instrument Panel fitted with and having digital display for following: (i) Start-stop switch with key, (ii) Water temperature indication, (iii) Lubrication oil pressure indication, (iv) Lubrication oil temperature indication, (v) Battery charging indication, (vi) RPM indication, (vii) Over speed indication, (viii) Low lub. Oil trip indication, (ix) Engine Hours indication. (c) Alternator : Synchronous alternator rated at 320 KVA, 415 volts at 1500 RPM, 3 phase 50 Hz, AC supply with 0.8 lagging power factor at 40 Degree C, 50% RH & at 1000 Meter MSL. The alternator shall be having IP-23 protection, SPDP enclosure, brushless, continuous duty, self-excited and self-regulated through AVR suitable for parallel operation in synchronizing mode & AMF mode conforming to IS: 4722 BS 2613 suitable for tropical conditions and with class - F/H insulation. (d) Base Frame & Foundation: Both the engine and alternator shall be mounted on suitable base frame made of MS channel with necessary reinforcement which shall be installed on suitable cement concrete foundation (1:2:4, M20 grade), foundation and vibration isolation arrangement as per recommendations of manufacturer. Vibration isolators (AVMs) should be provided to reduce vibration transmission to the surrounding structure. Foundation shall be designed considering safe bearing capacity of soil and approved structural engineers. Item includes cost of excavation, making of foundation etc. as required for mounting of DG set as per design, no additional payment shall be made. (e) Fuel Tank: Calibrated Day service fuel tank (Free standing type) suitable for outdoor installation of 990 Ltrs. capacity fabricated out of 3 mm thick M.S. sheet complete with all standard accessories and fuel piping between fuel tank and diesel engine with MS class 'C' pipes of suitable dia. Complete with valves, level indications, level indications with calibrated scale, provision for electronic level sensor, flange connection for inlet with float valve and over flow for automatic fuel filling system and other accessories etc. as required as per specifications. Suitable foundation as per OEM recommendation and outdoor type suitable canopy enclosed on four sides with lockable arrangement made out of M.S. sheet/Mesh as per OEM recommendations needs to be provided. (f) Exhaust System: Dry exhaust manifold with hospital grade exhaust silencer and catalytic converter including supply & fixing of Stainless Steel Expansion joints, Corrugated bellows suitable for 320 KVA DG set to fit in exhaust pipe. The exhaust piping including silencer inside and outside acoustic enclosure shall be thermal insulated. The exhaust pipe shall be minimum 05 mtr. above building height. The complete exhaust piping and structure shall be included in the quoted rate. (g) Starting System: 24V DC starting system (or as per manufacturer OEM standards) comprising of starter motors, voltage regulator and arrangement for initial excitation complete with suitable nos. of batteries with MS battery stand, external battery charging unit etc. as required as per OEM standards. (h) Acoustic and weather proof enclosure with arrangement for fresh air intake for cooling of the engine & alternator, extraction, discharging hot air in to the atmosphere as per specifications, meeting the latest CPCB IV+ norms. Acoustic enclosure should be type tested for Noise at the climatic conditions as per latest CPCB norms through authorized laboratory. (i) The work shall be executed as per Central Electrical Authority and Central Pollution Control Board - IV+ or latest norms as specified in tender specifications. (j) DG command control panel (PCC 3.3 or equivalent as per OEM design) suitable for synchronization with RS 485. (k) Necessary control cable shall be provided between DG Sets and DG Panel as approved by OEM manufacturer. (l) Approvals : Preparation of necessary drawing, Co-ordination and approval from Central Electrical Authority (CEA) and CPCB, Pollution control board standards as per requirement.		2	SET	INR	3306250.00	6612500.00	


 विद्युत रॉय / Bidyut Roy
 सहा. महाप्रबंधक (अभि.विद्युत)
 Asst. Gen. Manager (Engg-E)
 भा. वि. प्रा. कोल्हापूर हवाई अड्डा, कोल्हापूर
 A. A. I. Kolhapur Airport, Kolhapur

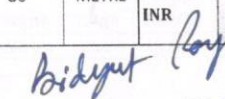
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1	2	3	4	5	12	13	53
2	"AMF PANEL" Design, Supply, Installation, Testing & Commissioning of automatic mains failure control including auto by-pass panel, suitable for 320 KVA silent type DG set complete with relays, timers, set of CTs for metering & protection and energy analyser to indicate currents, phase and line voltages, frequency, power factor, KWH, KVARH & provision for overload, short circuit, restricted earth fault, under frequency, control cabling from AMF panel to diesel engine (upto 50 mtrs.) and elsewhere if required, all complete and inter locking including the following : (a) 2 nos. 4 Pole, 630 A Power Contactors (b) 2 nos. 4 Pole, 630 A, 50 KA, Ics=100% Icu, Microprocessor based MCCB (with O/L, S/C & E/F protection) AND 630 A, 4 Pole manual Change over switch to Bypass the AMF operation i/c connections & interlocking. (c) Auto/Manual/Test/Off selector switch (d) Microprocessor based latest model AMF module (of reputed make viz., Siemens /ABB /Schneider or equivalent) with provision of over load, short circuit, restricted earth fault, under frequency etc. (e) 3 Sets of current transformers 15 P 10 accuracy for protection and 15 VA class-I for metering (f) Digital VAF meter to indicate current, voltage, frequency, power factor and KWH (g) Phase Indicating lamps (R, Y, B), indicating lamps for load on mains and load on set, Battery Charger ON (h) Fuse for instruments (i) Battery charger, complete with transformer/ rectifier, D.C. voltmeter and ammeter, selector switch for trickle, off and boost and current adjustment. (j) Control unit with three impulse automatic engine start/stop and failure to start lockout. (k) Impulse counter with locking and reset facility. (l) ON/OFF/Control circuit switch with (m) Audio/Video annunciation for (i) High water temperature (ii) Low lubricating oil pressure (iii) Engine over speed (iv) Engine fails to start (v) Full load maximum load warning All other accessories i/c wiring, relays, MCBs, Contactors, switches, etc. required for AMF operation as per Technical Specifications deemed to be included in the item.		2	Job	INR	391000.00	782000.00
3	"MAIN LT ESSENTIAL PANEL" Design, Supply, installation, testing & commissioning of cubicle TTA type, indoor LT panel as per IEC 61439, IS 8623:1993, IP 42 suitable for 415 V, 3 Phase, 4 Wire, 50 Hz, AC supply system fabricated in compartmentalized modular design from CRCA sheet steel of 2 mm thick for frame work and covers, 3 mm thick for gland plates for top & Bottom entry, extensible on both sides i/c cleaning & finishing complete with 7 tank process for powder coating in approved shade, having TPN aluminium alloy bus bars with 100% neutral bus as that of phase bus capacity of high conductivity, supported with SMC bus bar supports, with short circuit withstand capacity as per design, 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 copper earth bar of size as per IS 3043 subject to minimum 32 mm x 5 mm at the rear with 2 Nos. earth stud, solid flexible copper connections from main earth bus bar to switch gears with required size of Copper conductors/bus bars and control wiring with 2.5 sq. mm. FRLS PVC insulated copper conductor cable, cable alleys, cable gland plates in two half, i/c control & interlocking of incomers, bus coupler and providing Surge Protection Devices (SPDs) including following switch gears, accessories as per specifications: All MCCBs should be provided with front operated extended rotary handle and spreader links. The electrical panel shall be fully ventilated to maintain internal body temp. < 40 deg 'C' when room amb. temp. is equal of less than 35 deg 'C'. Required ventilation fans shall be provided and tested. All back access panel shall be housed with encapsulated spark gap based Type-1/Class A SPD with inbuilt fuse for each incomer at each bus section of 100 kA, 10/350 mS as per IS/IEC 62305-3LPL-I. All front operated panel/sub panels shall be housed with MOV (Metal Oxide Varistor) based Type-2/Class B SPD with inbuilt fuse for each incomer at each bus section of 10 kA & 10/350 mS, as per IS/IEC 62305-3 LPL-I. Each panel shall be equipped with Automatic Fire Suppression system, having linear pneumatic heat detection tube based with Novec 1230. The system shall be LPCB approved & coordination with Fire alarm system etc. suitable for the panel size accordance with specifications, NEC-2011, NBC ammended upto date. Incomer: (a) 630 A, 4P MCCB, Microprocessor based release (Ics = Icu = 50kA) with inbuilt O/L, S/C & E/F protection as per specification - 2 Nos (b) R, Y, B phase indicating LED lamps with 2 amp back up MCB - 2 Set (c) 96 x 96 sqmm digital MFM meter and 3 Nos cast resin CTs of ratio 630/5 A, class 0.5 accuracy and 10 VA burden, suitable to measure voltage, Ampere, Frequency, Power Factor, KVA, KW, KVAH, KWH, MDI & Individual Odd Harmonics low voltage and current including THD upto 31st Order with RS-485 port - 2 Set (d) ON, OFF, TRIP Indicating LED Lamps With 2 Amp MCB - 2 Set		1	JOB	INR	994500.00	994500.00


बिद्युत रॉय / Bidyut Roy
 सहा. महाप्रबंधक (अभि.विद्युत)

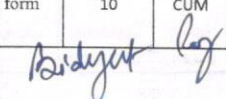
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1	2	3	4	5	12	13	53
4	"MAIN LT NON-ESSENTIAL PANEL" Design, Supply, installation, testing & commissioning of cubicle TTA type, indoor LT panel as per IEC 61439, IS 8623:1993, IP 42 suitable for 415 V, 3 Phase, 4 Wire, 50 Hz, AC supply system fabricated in compartmentalized modular design from CRCA sheet steel of 2 mm thick for frame work and covers, 3 mm thick for gland plates for top & Bottom entry, extensible on both sides i/c cleaning & finishing complete with 7 tank process for powder coating in approved shade, having TPN aluminium alloy bus bars with 100% neutral bus as that of phase bus capacity of high conductivity, supported with SMC bus bar supports, with short circuit withstand capacity as per design, 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 copper earth bar of size as per IS 3043 subject to minimum 32 mm x 5 mm at the rear with 2 Nos. earth stud, solid/flexible copper connections from main earth bus bar to switch gears with required size of Copper conductors/bus bars and control wiring with 2.5 sq. mm. FRLS PVC insulated copper conductor cable, cable alleys, cable gland plates in two half, i/c control & interlocking of incomers, bus coupler and providing Surge Protection Devices (SPDs) including following switch gears, accessories as per specifications: All MCCBs should be provided with front operated extended rotary handle and spreader links. The electrical panel shall be fully ventilated to maintain internal body temp. < 40 deg 'C' when room amb. temp. is equal of less than 35 deg 'C'. Required ventilation fans shall be provided and tested. All back access panel shall be housed with encapsulated spark gap based Type-1/Class A SPD with inbuilt fuse for each incomer at each bus section of 100 kA, 10/350 mS as per IS/IEC 62305-3LPL-I. All front operated panel/sub panels shall be housed with MOV (Metal Oxide Varistor) based Type-2/Class B SPD with inbuilt fuse for each incomer at each bus section of In 1 & I rms 20 kA, 5/20 mS, as per IS/IEC 62305-3 LPL-I. Each panel shall be equipped with Automatic Fire Suppression system, having linear pneumatic heat detection tube based with Novec 1230. The system shall be LPCB approved & coordination with Fire alarm system etc. suitable for the panel size accordance with specifications, NEC-2011, NBC ammended upto date. INCOMERS: (a) 630 A, 4P MCCB with built in Microprocessor based release with adjustable thermal setting (Ics = Icu =50 KA) with inbuilt O/L, S/C & E/F protection as per specification - 2 Nos. (b) R, Y, B phase indicating LED lamps with 2 amp back up MCB - 2 Set (c) 96 x 96 sqmm digital MFM meter and 3 Nos cast resin CTs of ratio 630/5 A, class 0.5 accuracy and 10 VA burden, suitable to measure voltage, Ampere, Frequency.		1	JOB	INR	731250.00	731250.00
5	Dismantling of Existing 125 KVA DG set along with AMF panels terminations, cable connections, Diesel Tanks including shifting to store or as directed by E-I-C etc. complete as required.		1	Job	INR	17550.00	17550.00
6	Supplying and fixing of following ways surface/ recess mounting, vertical type, 415 V, MCCB incomer TPN MCB distribution board of sheet steel, dust protected, duly powder painted, inclusive of tinned copper bus bar, common neutral link, earth bar, din bar for mounting MCBs/MCCB (but without outgoing MCBs and MCCB incomer) as required. 8 way (4 + 24), Double door		2	EACH	INR	14625.00	29250.00
7	Supplying and fixing following way, horizontal type three pole and neutral, sheet steel, MCB distribution board, 415 V, on surface/ recess, complete with tinned copper bus bar, neutral bus bar, earth bar, din bar, interconnections, powder painted including earthing etc. as required. (But without MCB/RCCB/ Isolator) 8 way (4 + 24), Double door		2	EACH	INR	6844.50	13689.00
8	Supplying and fixing following way, single pole and neutral, sheet steel, MCB distribution board, 240 V, on surface/ recess, complete with tinned copper bus bar, neutral bus bar, earth bar, din bar, interconnections, powder painted including earthing etc. as required. (But without MCB/RCCB/Isolator) 8 way, Double door		2	EACH	INR	3451.50	6903.00
9	Supplying and fixing Cable End Box (Loose wire box) (IP 43) suitable for following single pole and neutral, sheet steel, MCB distribution board, 240 V, on surface/ recess, complete with testing and commissioning etc. as required. For 8 way, Double door SPN MCBDB		2	EACH	INR	1345.50	2691.00
10	Supplying and fixing Cable End Box (Loose wire box) (IP 43) suitable for following triple pole and neutral, sheet steel, MCB distribution board, 415 V, on surface/ recess, complete with testing and commissioning etc. as required. For 8 way, Double door TPN MCBDB		2	EACH	INR	2515.50	5031.00
11	Supplying and fixing Cable End Box (Loose wire box) suitable for triple pole and neutral, sheet steel, Vertical MCB distribution board, 415 V, on surface/ recess,		2	EACH	INR	3393.00	6786.00
12	Supplying and fixing 6 amps to 32 amps rating, 240/415 volts, "C" curve, miniature circuit breaker suitable for inductive load of following poles in the existing MCB DB complete with connections, testing and commissioning etc. as required. Single pole		76	EACH	INR	144.78	11003.28
13	Supplying and fixing 6 amps to 32 amps rating, 240/415 volts, "C" curve, miniature circuit breaker suitable for inductive load of following poles in the existing MCB DB complete with connections, testing and commissioning etc. as required. Double pole		2	EACH	INR	465.54	931.08


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 Asst. Gen. Manager (Engg-E)
 वि. प्रा. कोल्हापूर हवाई अड्डा, कोल्हापूर

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Sl. No.	Item Description	Item Code / Make	Quantity	Units	Quoted Currency in INR / Other	BASIC RATE(Excluding GST) In Figures To be entered by the	TOTAL AMOUNT Excluding GST
1	2	3	4	5	12	13	53
14	Supplying and fixing 6 amps to 32 amps rating, 240/415 volts, "C" curve, miniature circuit breaker suitable for inductive load of following poles in the existing MCB DB complete with connections, testing and commissioning etc. as required. Triple pole		32	EACH	INR	753.48	24111.36
15	Supplying and fixing following rating, double pole, 240 volts, isolator in the existing MCB DB complete with connections, testing and commissioning etc. as required. 40 amps		2	EACH	INR	285.25	570.50
16	Supplying and fixing following rating, four pole, 415 volts, isolator in the existing MCB DB complete with connections, testing and commissioning etc. as required. 40 amps		1	EACH	INR	535.16	535.16
17	Supplying and fixing following rating, four pole, 415 volts, isolator in the existing MCB DB complete with connections, testing and commissioning etc. as required. 63 amps		1	EACH	INR	670.06	670.06
18	Supplying and fixing following rating, double pole, (single phase and neutral), 240 volts, residual current circuit breaker (RCCB), having a sensitivity current upto 300 milliamperes in the existing MCB DB complete with connections, testing and commissioning etc. as required. 40 amps		8	EACH	INR	1988.65	15909.20
19	Providing and fixing following rating and breaking capacity MCCB with thermomagnetic release and terminal spreaders in existing cubicle panel/MCCB Distribution board including connections, testing, commissioning etc. as required. 100 A, FP, 25 KA, (Ics=Icu=100%)		2	EACH	INR	6379.78	12759.56
20	Supplying and installing following size of perforated Hot Dipped Galvanised Iron cable tray cable tray with perforation not more than 17.5%, in convenient sections, joined with connectors, suspended from the ceiling with G.I. suspenders including G.I. bolts & nuts, etc as required. 150 mm width X 50 mm depth X 1.6 mm thickness		200	METRE	INR	409.50	81900.00
21	Supplying and installing following size of perforated Hot Dipped Galvanised Iron cable tray cable tray with perforation not more than 17.5%, in convenient sections, joined with connectors, suspended from the ceiling with G.I. suspenders including G.I. bolts & nuts, etc as required. 300 mm width X 50 mm depth X 1.6 mm thickness		100	METRE	INR	614.25	61425.00
22	Supplying and installing following size of perforated Hot Dipped Galvanised Iron cable tray cable tray with perforation not more than 17.5%, in convenient sections, joined with connectors, suspended from the ceiling with G.I. suspenders including G.I. bolts & nuts, etc as required. 450 mm width X 50 mm depth X 2.0 mm thickness		60	METRE	INR	848.25	50895.00
23	Supply of following sizes LT power cable of 1.1 KV grade of following sizes aluminum conductor XLPE insulated PVC sheathed armored cable confirming to IS 7098/1/1988 with upto date amendment as required. 3.5 x 300 sq.mm. Al Aromured XLPE cable		2680	METRE	INR	1145.07	3068787.60
24	Supply of following sizes LT power cable of 1.1 KV grade of following sizes aluminum conductor XLPE insulated PVC sheathed armored cable confirming to IS 7098/1/1988 with upto date amendment as required. 3.5 x 50 sq.mm. Al Aromured XLPE cable		500	METRE	INR	591.90	295950.00
25	Supply of following sizes LT power cable of 1.1 KV grade of following sizes aluminum conductor XLPE insulated PVC sheathed armored cable confirming to IS 7098/1/1988 with upto date amendment as required. 3.5 x 35 sq.mm. Al Aromured XLPE cable		500	METRE	INR	179.83	89915.00
26	Supply of following sizes LT power cable of 1.1 KV grade of following sizes aluminum conductor XLPE insulated PVC sheathed armored cable confirming to IS 7098/1/1988 with upto date amendment as required. 3.5 x 25 sq.mm. Al Aromured XLPE cable		500	METRE	INR	145.56	72780.00
27	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size in the existing RCC/ HUME/ METAL / HDPE pipe as required. Upto 35 sq. mm		70	METRE	INR	35.10	2457.00
28	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size in the existing RCC/ HUME/ METAL / HDPE pipe as required. Above 35 sq. mm and upto 95 sq. mm		70	METRE	INR	64.35	4504.50
29	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size in the existing RCC/ HUME/ METAL / HDPE pipe as required. Above 185 sq. mm and upto 400 sq. mm		2410	METRE	INR	128.70	310167.00
30	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size in the existing masonry open duct as required. Upto 35 sq. mm		80	METRE	INR	40.95	3276.00


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Sl. No.	Item Description	Item Code / Make	Quantity	Units	Quoted Currency in INR / Other	BASIC RATE(Excluding GST) In Figures To be entered by the	TOTAL AMOUNT Excluding GST
1	2	3	4	5	12	13	53
31	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size in the existing masonry open duct as required. Above 35 sq. mm and upto 95 sq. mm		80	METRE	INR	64.35	5148.00
32	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size in the existing masonry open duct as required. Above 185 sq. mm and upto 400 sq. mm		180	METRE	INR	99.45	17901.00
33	Laying and fixing of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size on cable tray as required. Upto 35 sq. mm (clamped with 1mm thick saddle)		400	METRE	INR	40.95	16380.00
34	Laying and fixing of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size on cable tray as required. Above 35 sq. mm and upto 95 sq. mm (clamped with 25x3mm MS flat clamp)		800	METRE	INR	81.90	65520.00
35	Laying and fixing of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size on cable tray as required. Above 185 sq. mm and upto 400 sq. mm (clamped with 40x3mm MS flat clamp)		90	METRE	INR	140.40	12636.00
36	Supplying and making end termination with brass compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1 KV grade as required. 3.5 X 300 sq. mm (70 mm)		24	SET	INR	936.00	22464.00
37	Supplying and making end termination with brass compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1 KV grade as required. 3.5 x 70 Sqmm (38 mm)		10	SET	INR	526.50	5265.00
38	Supplying and making end termination with brass compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1 KV grade as required. 3.5 x 35 Sqmm (32 mm)		10	SET	INR	351.00	3510.00
39	Supplying and making end termination with brass compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1 KV grade as required. 3.5 x 25 Sqmm (28 mm)		10	SET	INR	234.00	2340.00
40	Supplying of following size DWC HDPE pipe ISI marked along with all accessories like socket, bend, couplers etc. conforming to IS 14930, Part II complete as required. 120 mm dia (OD-120 mm & ID-103 mm nominal)		2500	METRE	INR	140.40	351000.00
41	Laying of following size DWC HDPE pipe ISI marked along with all accessories like socket, bend, couplers etc. conforming to IS 14930, Part II 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. 120 mm dia (OD-120 mm & ID-103 mm nominal)		2500	METRE	INR	111.15	277875.00
42	Providing, laying and fixing pf following dia G.I. pipe (medium class) in ground complete with G.I. fittings including trenching (75 cm deep) and re-filling etc as required. 150 mm Dia.		50	METRE	INR	1755.00	87750.00
43	Providing, laying and fixing pf following dia G.I. pipe (medium class) in ground complete with G.I. fittings including trenching (75 cm deep) and re-filling etc as required. 80 mm Dia.		30	METRE	INR	857.61	25728.30
44	Providing, laying and fixing following dia RCC pipe NP2 class (light duty) in ground complete with RCC collars, jointing with cement mortar 1:2 (1 cement : 2 fine sand) including trenching (75 cm deep) and refilling etc as required. (a) 300 mm dia		30	METRE	INR	994.50	29835.00
45	Excavation for cable trenches in soft soil, depth upto 1.2 m including dressing of sides lift upto 1.5 m, including getting out the excavated soil, refilling with sand and or good soil after laying of cable/ pipe etc in layers of 20 cm, ramming, watering and disposal of surplus excavated soil as directed, within a lead of 50 metres.		5	CUM	INR	526.50	2632.50
46	Excavation of the cable trenches in hard rock not exceeding 1.5 metres in width, and lift upto 1.5 metres, including getting out the excavated soil and disposal of excavated soil as directed within a lead of 50 metres		10	CUM	INR	994.50	9945.00
47	Providing and laying in position cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) in crossings, trenches etc. including form work as required.		10	CUM	INR	5265.00	52650.00


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1	2	3	4	5	12	13	53
48	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 meter long etc. with charcoal/ coke and salt as required.		6	SET	INR	6201.00	37206.00
49	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 meter long etc. with charcoal/ coke and salt as required.		4	SET	INR	13806.00	55224.00
50	Providing and fixing earth bus of 50 mm x 5 mm copper strip on surface for connection etc. as required.		2	METRE	INR	2237.63	4475.26
51	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.		30	METRE	INR	1118.81	33564.30
52	Providing and fixing 25 mm X 5 mm G.I. strip in 40 mm dia G.I. pipe from earth electrode including connection with G.I. nut, bolt, spring, washer excavation and re-filling		90	METRE	INR	111.15	10003.50
53	Providing and fixing 25 mm X 5 mm copper strip on surface or in recess for connections etc. as required.		20	METRE	INR	1118.81	22376.20
54	Providing and fixing 25 mm X 5 mm G.I. strip on surface or in recess for connections etc. as required.		40	METRE	INR	111.15	4446.00
55	Providing and fixing 6 SWG dia GI wire on surface or in recess for loop earthing along with existing surface/ recessed conduit/ submain wiring/cable as required.		3000	METRE	INR	18.72	56160.00
56	Providing and fixing M.V. danger notice plate of 200 mm X 150 mm, made of mild steel, at least 2 mm thick, and vitreous enameled white on both sides, and with inscription in single red colour on front side as required.		4	Each	INR	585.00	2340.00
57	Providing and fixing carbon dioxide (CO2) type fire extinguishers conforming to IS 2878 : 1976 and cylinders fully charged of following capacity. (a) 4.5 KG		10	Each	INR	4446.00	44460.00
58	Supply and fixing of foam fire extinguishers, Portable type 9 lit capacity hanged on wall with bracket complete as required.		10	Each	INR	1170.00	11700.00
59	Supply and fixing safety instruction chart written in English, Hindi and local language in word duly framed with 5 mm thick glass as required. (Approx. from area 1.20 Sq.mt).		2	Each	INR	2164.50	4329.00
60	Providing of set of 4 Nos. 9.5 Litre capacity G.I. bucket painted in post office red colour with prior coat of red oxide paint and written with white paint 'FIRE' and mounted on MS angle iron frame with bracket of appropriate size & capacity i/c filling sand etc.		2	SET	INR	3042.00	6084.00
61	Providing of First aid box as approved by St. John Ambulance Brigade /Indian Red Cross conforming to IS:2217 - 1963. (Wall mounting type Metal Box suitable for workplace with lock & key arrangement)		1	Each	INR	1170.00	1170.00
62	Supply and fixing Shock treatment chart written in English, Hindi and local language in word duly framed with 5 mm thick glass as required. (Approx. from area 1.20 Sq.mt).		2	Each	INR	2164.50	4329.00
63	Providing & fixing in position 1000 mm wide, Electrical Insulating Mats as per IS 15652:2006, 2mm thick, suitable upto 3.3 KV, fire retardant, no effect of acids, alkalies and transformer oils, moisture proof, high tensile strength and texture finish / cloth impression (Anti slip, marking on top).		30	Metre	INR	643.50	19305.00
64	Providing 1 inch dual directional cast iron heavy duty barrel Pump with steel discharge spout suitable for Transferring Oil/Diesel/Kerosene etc. complete as required.		1	Each	INR	4188.60	4188.60
Total in Figures							14620637.96
Quoted Rate in Words			INR One Crore Forty Six Lakh Twenty Thousand Six Hundred & Thirty Seven and Paise				

Bidyut Roy
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 सहा. महाप्रबंधक (अभि.विद्युत)
Asst. Gen. Manager (Engg-E)
 भा. वि. प्रा. कोल्हापूर हवाई अड्डा, कोल्हापूर
A. A. I. Kolhapur Airport, Kolhapur