

Ref. No. AAI/RPR/ENGG (E)/CW/WO-02/2022-23/

Date: 06.10.2022

स्पीड पोस्ट / ई-मेल
By Speed Post/E-Mail

सेवा में,

मेसर्स अवस्थि इलैक्ट्रिक वर्क्स,
107 / 265, ब्रम्ह नगर,
कानपुर-208012 (उ.प्र.)

M/s Awasthi Electric Works,
107/265, Brahma Nagar,
Kanpur-208012 (U.P.)

कार्य का नाम:- स्वामी विवेकानन्द हवाई अड्डा, रायपुर पर रनवे-24 का विस्तार सी-श्रेणी के विमान और अन्य संबंधित कार्यों के लिए उपर्युक्त एप्रन का विस्तार। उपशीर्ष:- ग्लाइड पाथ का ट्रांस-इंस्टॉलेशन के लिए विद्युत कार्य।

Name of work:- Extension of runway at 24 beginning, expansion of apron suitable for C-category of aircraft and other associated works at S.V. Airport, Raipur. SH:- Electrical works for Trans-Installation of Glide Path.

संदर्भ / Ref:- आपकी ई-निविदा जो 12.09.2022 को खोली गई / Your e- tender opened on 12.09.2022.

महोदय / Sir,

1. उल्लिखित कार्य हेतु आपकी ई-निविदा के संबंध में आपके द्वारा उद्धरीत कुल रु. **80,90,293.00** (रुपये

अस्सी लाख नब्बे हजार दो सौ त्रयान्वे मात्र) (जी. एस. टी. रहित), जो कि अनुमानित रु. **1,06,57,006.00** (जी. एस. टी. रहित) की तुलना में **24.08%** कम है और उचित लागत रु. **1,06,89,989.00** की तुलना में **24.32%** कम है, को अध्यक्ष, भारतीय विमानपत्तन प्राधिकरण की ओर से स्वीकृत किया जाता है।

Your e- tender for the work mentioned above is hereby accepted on behalf of Chairman, Airports Authority of India, at the item rates quoted by you totaling of **Rs. 80,90,293.00 (Rupees Eighty Lakhs Ninety Thousand Two Hundred Ninety Three Only)** (excluding GST), which is **24.08% Below** estimated cost of **Rs 1,06,57,006.00** (excluding GST) and **24.32 % Below** compared to Justified cost of **Rs. 1,06,89,989.00** (excluding GST).excluding GST.

2. वरिष्ठ प्रबंधक (अभि-वि), भाविप्रा, स्वामी विवेकानंदा हवाई अड्डा, रायपुर, उपरोक्त कार्य के प्रभारी होंगे। आपसे निवेदन है कि आप वरिष्ठ प्रबंधक (अभि-वि) भाविप्रा, स्वामी विवेकानंदा हवाई अड्डा, रायपुर, के कार्यालय में दिनांक **17.10.2022** तक उपस्थित रहकर हस्ताक्षर करने तथा करार की कार्यवाही पूर्ण करने का कष्ट करें। ठेका करार का निष्पादन एक सौ रुपए मूल्य के गैर अदालती स्टैम्प पेपर पर किया जाएगा तथा स्टैम्प पेपर का खर्च आपके द्वारा वहन किया जाएगा।

SM Engg (E), AAI, Swami Vivekananda Airport, Raipur, shall be the Engineer - In-charge of the work. You are requested to attend the office of SM Engg (E) AAI, Swami Vivekananda Airport, Raipur by **17.10.2022** 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.



भारतीय विमानपत्तन प्राधिकरण AIRPORTS AUTHORITY OF INDIA

3. आपसे अनुरोध है कि इस पत्र के जारी होने की तारीख से 10 दिनों के भीतर सुरक्षा राशि जो टेंडर राशि के @10% हैं को प्रस्तुत करें, अन्यथा अनुबंध के पृष्ठ 61 पर शर्त के अनुसार आपके बिल से काटा जाएगा

You are requested to furnish Security Deposit @ 10% of tender amount within 10 days from the date of issue of this letter failing which same will be deducted as per condition on page 61 of contract document from your bill.

4. आपसे अनुरोध है कि आप टेका श्रमिक (विनियम एवं उन्मुलन) अधिनियम 1970 के उपबन्धों का अनुपालन करें। साथ ही टेका श्रमिक (विनियम एवं उन्मुलन) केन्द्रीय नियमावली 1971 एवं केन्द्रीय एवं राज्य सरकारों के न्यूनतम वेतन तथा उससे सम्बन्धित अन्य नियमों का पालन 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 and minimum wages act and rules of Central and State Governments, with its upto date amendments thereof.

5. आपको यह भी निर्देश दिया जाता है कि आप वरिष्ठ प्रबंधक (अभि-वि), भाविप्रा, स्वामी विवेकानंदा हवाई अड्डा, रायपुर (मो. नं. - 7389494314), से अविलम्ब सम्पर्क करें जो आपको कार्यस्थल सौंपेंगे।

You are also directed to contact Sr. Manager (Engg-E), AAI, S.V. Airport, Raipur (Mob. No.- 7389494314), immediately who will arrange to hand over the site to you.

6. कृपया यह भी नोट कर लें कि निविदा के अनुसार कार्य निष्पादन हेतु अनुगत समय 08 (आठ) महीने है जो दिनांक **17.10.2022** से माना जाएगा।

Please note that the time allowed for carrying out the work shall be 08 (Eight) months and same will be reckoned from **17.10.2022**.

7. इस ठेके से संबंधित किसी भी प्रकार के पत्र व्यवहार के लिए कार्य के प्रभारी को संबंधित करेंगे।
Any further correspondence in connection with the contract should normally be addressed to the Engineer - in- charge.

8. कृपया इस पत्र कि प्राप्ति सूचना दे तथा इसके साथ संलग्न अनुप्रति पर हस्ताक्षर करके टोकन के प्रतिग्रहण के रूप में अधोहस्ताक्षरी को वापस भेज दें।
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.

9. कार्यआदेश के संबंध में किसी प्रकार की टंकणीय त्रुटि/विसंगति होने पर अंग्रेजी संस्करण मान्य होगा।
With reference to this work order, if in case of any typographical mistake/discrepancy arise, the English version shall prevail.

धन्यवाद / Thanking you,
संलग्न / Encl: Schedule

भवदीय / Yours faithfully,

वरिष्ठ प्रबंधक (अ-वि) / Sr. Manager (E-E)
एएआई, स्वामी विवेकानंदा, हवाई अड्डा, रायपुर / AAI, S.V. Airport, Raipur

स्वामी विवेकानन्द एयरपोर्ट, रायपुर (छ.ग.)-492015
Swami Vivekananda, Airport, Raipur (CG)- 492015

दूरभाष-0771-2418044
Phone.- 0771-2418044

प्रतिलिपि (बाह्य):-

1. श्रम प्रवर्तन अधिकारी (केन्द्रीय) एल-7, डी/6, आदर्श सोसायटी, सेक्टर-1, अवन्ति विहार, रायपुर
2. क्षेत्रीय भविष्य निधि आयुक्त-1, कर्मचारी भविष्य निधि संगठन, (श्रम एवं रोजगार मंत्रालय, भारत सरकार), क्षेत्रीय कार्यालय छत्तीसगढ़, खंड-डी योजना नं. 32, इंदिरा गांधी व्यवसायीक परिसर, पन्डरी, रायपुर, (छ.ग.)

प्रतिलिपि (आन्तरिक):-

1. संयुक्त महाप्रबंधक (अभि.-विद्युत), पूर्वी क्षेत्र, भाविप्रा, एन.एस.सी.बी.आई. हवाई अड्डा, कोलकाता
2. उप महाप्रबंधक (सतर्कता), पूर्वी क्षेत्र, भाविप्रा, एन.एस.सी.बी.आई. हवाई अड्डा, कोलकाता

आन्तरिक वितरण:-

(सूचनार्थ)

1. विमानपत्तन निदेशक, स्वामी विवेकानन्द हवाई अड्डा, रायपुर
2. सहा. महाप्रबंधक, (अभि-सिविल)-I, स्वामी विवेकानन्द हवाई अड्डा, रायपुर
3. उप. महाप्रबंधक (वित्त), स्वामी विवेकानन्द हवाई अड्डा, रायपुर
4. सहा. महाप्रबंधक, (अभि-वि), स्वामी विवेकानन्द हवाई अड्डा, रायपुर

वरिष्ठ प्रबंधक (अ-वि)

एएआई, स्वामी विवेकानंदा, हवाई अड्डा, रायपुर / AAI, S. V. Airport, Raipur

वरिष्ठ प्रबंधक (अभि-विद्युत)
Sr. Manager [E-E]
AAI, S. V. Airport, Raipur

Airports Authority of India
Swami Vivekananda Airport, Raipur

Schedule of Quantities

Name of Work:- Extension of runway at 24 beginning, expansion of apron suitable for C- category of aircraft and other associated works at S.V. Airport, Raipur. SH-
Electrical works for Trans-installation of Glide path.

S. No.	Item Description	Unit	Qty.	Rate (Rs.)	Amount (Rs.)
	SH-I: LT Panel & SPDs				
1	Design, fabrication, supply, installation, testing and commissioning of vermin & dust proof, front operated cubicle type floor mounted, OUTDOOR double door type LT panel board made out of 2.0 mm thick for body & doors and all partitions shall be of 1.6 mm thick CRCA sheet, totally enclosed type, IP 54 ,duly rust inhibited, stove enameled, powder coated paint , fully compartmentalized complete with double hinged front door with lockable arrangement with name plates, heavy duty rubber gaskets, removable gland plates made out of 3 mm thick sheet steel, 02nos earth stud, MS angle iron channel, internal wiring with 1.5 sqmm FR copper wires/cable, connection, interconnection, mechanical interlocking between 2 incomers and Bus coupler including necessary civil works(if required) like PCC, brick work etc. complete as required.	Job	1	395000.00	395000.00
	Incomer				
	3 Nos. 160 A, four pole Thermal Magnetic release variable range, Moulded Case Circuit Breaker with extended rotary handle and all accessories including providing spreader terminals and auxiliary contacts (Ics=100% Icu value 25 KA).				
	a) 9 Nos. Phase indication LED lamps with 2Amp MCB, 03 Sets ON/OFF' indicating light with 2A MCB, 03 Nos Multifunction meter, class 0.5 with LCD Display shown V, A, Hz & PF.				
	Bus Bar				
	200 Amps FP bus bar of high conductivity electrolytic quality aluminium alloy.				
	Bus Coupler				
	1 No. 160 A, MCCB and 1 No. 160 A, Manual change over with extended rotary handle and all accessories including providing spreader terminals indication LED lamps with 2Amp MCB, ON/OFF etc. complete as required.				
	Out Going				
	4 Nos. 100 A, four pole Thermal Magnetic release variable range, Moulded Case Circuit Breaker with extended rotary handle and all accessories including providing spreader terminals and auxiliary contacts (Ics=100% Icu value 25 KA).				
	Note: Output of each changeover should be distributed to 2 Nos O/Gs with suitable subsections/compartments for MCCBs, bubars, metering, cable alleys etc.				

S. No.	Item Description	Unit	Qty.	Rate (Rs.)	Amount (Rs.)
2	Design, fabrication, supply, installation, testing and commissioning of dust, damp and vermin proof cubicle free floor, indoor type factory built sheet steel enclosed modular bolted construction, suitable for operation on $415 \pm 10\%$ volts, 50 Hz AC 3 phase 4 wire supply system fabricated out of CRCA sheet steel of 2.0 mm thick for frame work and 2.0 mm thick for doors/ covers, 3mm thick for gland plates i/c cleaning & finishing complete with 7 tank process for powder coating in approved shade, having TPN Aluminium bus bars of high conductivity, DMC/SMC bus bar supports, bottom base channel of section not less than ISMC 75mm, entire panel shall have a common copper earth bar of suitable size with 2 nos earth studs, including control wiring with 1.5 sqmm. PVC insulated FRLS copper conductor Single Core cable for voltage & 2.5 sq.mm for current circuits, cable alleys, cable gland plates, danger notice plates, etc. necessary metering protections & indications and mounted with the following switch gears.	Job	1	525000.00	525000.00
	INCOMER i) 3 No. 100 Amps. 4P , MCCB '36KA, (Ics = Icu= 36KA) with thermal magnetic release having O/L & S/C protection equipped with extendable rotary Handle and extendable terminals with the following: ii) 6 Nos. Phase indication LED lamps with 2Amp MCB, 02 Sets ON/OFF' indicating light with 2A MCB, 02 Nos Multifunction meter, class 0.5 with LCD Display shown V, A, Hz & PF. iii) 1 No. for each incomer pre-wired Primary protection (Class B / Type 2) surge protection device (SPD) having 100KA , 10/350 micro seconds neutral to earth, 50 KA, 10/350 micro seconds line to neutral with limiting voltage less than 1.5 KV on the mains power entry point at the incomers. The enclosure shall have IP:55 weather proof with cable gland. The three phase SPD shall have the followings. i) Line protected : Line-Neutral and Neutral to earth + Line to Line +Line to Ground (4 modes). ii) Nominal Operating Voltage : 220/240 V AC iii) Input power Frequency : 47-60 Hz iv) Protection : Transverse and common mode v) Response Time : <100 ns vi) Surge rating : 10/350 us pulse response vii) Voltage Protection Level : < 1.5 KV viii) Approval and Testing : Listed with UL-1449-3/IEC - 61643 - 62305 as applicable. AUTO TRANSFER SWITCH i) 1 No. 4 pole, 100 Amps. Open execution type with complete protection.				
	BUS-BAR : TPN aluminium main bus bars of minimum of 300 Amp capacity with heat shrinkable coloured sleeves and i/c DMC/SMC bus bars supports at required intervals complete.				

S. No.	Item Description	Unit	Qty.	Rate (Rs.)	Amount (Rs.)
	OUT GOING: i) 3 No. 63 Amps. 4P, MCCB '36KA, (Ics = Icu= 36KA) with thermal magnetic release having O/L & S/C protection equipped with extendable Rotary handle. ii) 1 No. 100Amps. 4P, MCCB '36KA, (Ics = Icu= 36KA) with thermal magnetic release having O/L & S/C protection equipped with extendable Rotary handle with the following: 4 Set of ON-OFF indication lamps (LED type) with 2 Amp control MCBs. iii) 04 Nos 32 A, 10 kA, DP MCB.				
	Power Quality Analyzer & DATA LOGGER: Microprocessor based Multi channel Power Quality Analyzer and Data Logger device for electrical parameters measuring and monitoring on the data logger display as well as data archiving (storage) having inbuilt real time clock with power from a lithium-type battery.				
	LAPTOP FOR DATA RECORD: 64 bit, Window 10 loaded with user friendly programs, 15" screen Laptop with all accessories having Intel Core i5 (10th Gen) or equivalent processor, HDD (1TB), RAM (8 GB), Graphic Card (1 GB) including wireless optical mouse etc. complete as required (HP Pavilion - 15-cs3006tx or equivalent).				
	The panel shall have suitable DIN bar provision for fixing the Surge Protection Device of min. 4 modules				
3	Supply of 160 Amp 4 pole automatic transfer switch Panel IP65/54 of Factory made high quality Polycarbonate PC - GFS (shock proof, rust free, corrosion free, acid and chemical resistant, fire retardant, self-extinguishing, having high impact against mechanical load, made of halogen and silicon free recyclable material conform to RoHS directive 2002/95/EC. UV resistant according to IEC 61439-1, clause 10.2.4: The panel should be anti-acid & anti corrosive. The Panel having high grade internally embedded gasket made of Polyurethane (PUR).The type test report as per CPRI (in accordance with IEC 60 439-1 Degree of protection against mechanical load should be IK08 (5 Joule) in accordance with IEC 62262. Should withstand glow wire test at 9600C in accordance with IEC 60 695-2-11 UL subject 94, should be flame retardant and self-extinguish. The Panel should have test certificate in accordance with IEC 61 439-1 (IS8623). Rated insulation voltage should be 690V AC as per IEC 60664. To prevent the condensation in each meter panel "dew guard" to be used in right quantity in each system. Note:- The panel should be factory made with OEM Manufacturing certificates and Routine test Certificates by OEM . Should be assembled in OEM System House only.	Each	1	145000.00	145000.00
4	Installation, Testing & Commissioning of 160 Amp 4 pole automatic transfer switch Panel IP65/54 of Factory made high quality Polycarbonate PC - GFS (shock proof, rust free, corrosion free, acid and chemical resistant, fire retardant, self-extinguishing, having high impact against mechanical load, made of halogen and silicon free recyclable material conform to RoHS directive 2002/95/EC. UV resistant according to IEC 61439-1, clause 10.2.4: The panel should be anti-acid & anti corrosive. The Panel having high grade internally embedded gasket made of Polyurethane (PUR) and painting of suitable cement concrete foundation made up of 1 : 2 : 4 (1 Cement: 2 Coarse Sand : 4 Grade Stone aggregate 20 mm nominal size) including wiring, inter connections, earthing etc. as required.	Job	1	10000.00	10000.00

S. No.	Item Description	Unit	Qty.	Rate (Rs.)	Amount (Rs.)
	SH-II: Internal Electrical Works				
5	Wiring for light point/ fan point/ exhaust fan point/ call bell point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable in Fire Retardant UPVC trunking (as per IS 14927-Part 2), with modular switch, modular plate, suitable PVC box and earthing the point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable etc. as required. (a) Group C	Each	23	1100.00	25300.00
6	Wiring for light/ power plug with 2X4 sq. mm FRLS PVC insulated copper conductor single core cable in Fire Retardant UPVC trunking (as per IS 14927-Part 2) alongwith 1 No. 2.5 sq. mm FRLS PVC insulated copper conductor single core cable for loop earthing as required.	Meter	80	320.00	25600.00
7	Supplying and drawing of 3 x 2.5 sq. mm sizes of FRLS PVC insulated copper conductor, single core cable in the existing surface/ recessed steel/ PVC conduit as required.	Meter	50	130.00	6500.00
8	Wiring for circuit/ submain wiring alongwith earth wire with the 2 X 2.5 sq. mm + 1 X 2.5 sq. mm earth wire sizes of FRLS PVC insulated copper conductor, singlecore cable in Fire Retardant UPVC trunking (as per IS 14927-Part 2) as required.	Meter	20	225.00	4500.00
9	Supplying and fixing suitable size PVC Modular box with modular plate and cover in front on surface or in recess, including providing and fixing 6 pin 5/6 & 15/16 A modular socket outlet and 15/16 A modular switch, connections etc. as required.	Each	12	600.00	7200.00
10	Supply of 9 W LED Inverter/ rechargeable bulb With Auto-Charge Technology having Emergency time backup of not less than 4 Hours at min. of 50% illumination, suitable for 230 V, 50 Hz Single phase supply complete as required.	Each	2	850.00	1700.00
11	Supply of 400 mm sweep wall fan having Aerodynamically designed, Balanced Blade, thermal overload protection, Jerk free oscillation (60°) & smooth running, 1400 RPM suitable for use on 230 volts, 50 Hz, single phase, A.C. supply etc. complete as required.	Each	2	2700.00	5400.00
12	Supply of single phase, 225 mm dia. sweep Heavy Exhaust fan having thermal overload protection, with Louver and shutter/safety Guard from foreign objects, etc. complete as required suitable for use on 230 volts, 50 Hz, single phase, A.C. supply.	Each	1	4200.00	4200.00
13	Supply of indoor surface mounting 20 W (nominal capacity), efficiency of LED light fitting (Efficacy) not less than 110 lumens/Watt, CRI (Colour Rendering Index) is minimum 80, THD should not less than 10% complete with LED tube rod, accessories etc and suitable for use on 140 to 270 volts, 50 Hz, single phase, A.C. supply as required (Similar to Make- Havells or equivalent).	Each	7	790.00	5530.00
14	Supply of indoor surface mounting 9 W (nominal capacity), efficiency of LED light fitting (Efficacy) not less than 110 lumens/Watt, CRI (Colour Rendering Index) is minimum 80, THD should not less than 10% complete with LED tube rod, accessories etc and suitable for use on 140 to 270 volts, 50 Hz, single phase, A.C. supply as required (Similar to Make- Havells or equivalent).	Each	6	575.00	3450.00

S. No.	Item Description	Unit	Qty.	Rate (Rs.)	Amount (Rs.)
15	Supply of 30 W (nominal capacity) LED integral Flood Light type light fitting having pressure die cast housing with toughened glass, individual LEDs with secondary optics, IP 66, inbuilt convertor, accessories etc and suitable for use on 230 volts, 50 Hz, single phase, A.C. supply as required (Similar to Make- Havells or equivalent).	Each	5	3500.00	17500.00
16	Installation, testing and commissioning of wall bracket /ceiling fittings of all sizes and shapes containing upto two GLS/CFL/ LED lamps per fitting/wall fan, complete with all accessories including connections etc. as required.	Each	20	200.00	4000.00
17	Installation of exhaust fan Upto 450 mm sweep in the existing opening, including making good the damage, connection, testing, commissioning etc. as required.	Each	1	300.00	300.00
18	Supplying and fixing 3 pin 16 A Switch with socket in IP 66 enclosure suitable for outdoor installation on surface including connections etc. as required.	Each	3	890.00	2670.00
19	Providing & fixing (80 X 50) mm size UPVC cable trunking on surface including necessary couplers, joint cover, angles etc. along with all other accessories as required.	Meter	80	910.00	72800.00
20	Supply and fixing of 4 Module clip on supports suitable for fixing of switch, power Socket outlets including finishing plate etc. complete as required.	Each	12	195.00	2340.00
	SH-III: Distribution Boards & MCBs				
21	Supplying and fixing of 4 way (4 + 12) , Double door horizontal type PPI, 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)				
(a)	4 way , Double door	Each	3	850.00	2550.00
22	Supplying and fixing 5 A to 32 A rating, 240/415 V, 10 kA, "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.				
(a)	Single pole	Each	36	185.00	6660.00
23	Supplying and fixing of Four Pole 63 amps rating, 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.	Each	3	1650.00	4950.00
24	Supplying and fixing of 32 A rating, double pole, (single phase and neutral), 240 volts, residual current circuit breaker (RCCB), having a sensitivity current 300 milli amperes in the existing MCB DB complete with connections, testing and commissioning etc. as required.	Each	9	2750.00	24750.00

S. No.	Item Description	Unit	Qty.	Rate (Rs.)	Amount (Rs.)
	SH-IV: CABLE LAYING WORK				
25	Supply of aluminium conductor XLPE insulated, PVC sheathed, armoured power cable of 1.1 KV grade conforming to IS-7098 Part 1(1988) amended up to date.				
		Meter	1100	770.00	847000.00
(a)	3.5 X 185 Sq mm	Meter	1800	590.00	1062000.00
(b)	3.5 X 150 Sq mm	Meter	120	213.00	25560.00
(c)	3.5 X 35 Sq mm	Meter	100	160.00	16000.00
(d)	4 X 16 Sq mm				
26	Supply of copper conductor XLPE insulated, PVC sheathed, FRLSZH at outer Sheath armoured power cable of 1.1 KV grade conforming to IS-7098 Part 1(1988) amended up to date.				
		Meter	100	154.00	15400.00
(a)	3 x 2.5 sq mm				
27	Supply of HDPE Pipe of size 160 mm OD, PE-63, PN-6 as per IS:4984 of wall thickness not less than 11.2 mm complete as required.	Meter	2900	990.00	2871000.00
28	Laying of 160 mm outer dia HDPE Pipe with HDD trenchless method direct in ground in all type soil including 4 mm PP rope coupling of pipe, etc. complete (3 mtr below in normal roads/soil and 6 mtr below runways and taxiways) in all respect as per specification. (Cost of HDPE Pipe is not included in the item)	Mtr.	2900	350.00	1015000.00
29	Supply of 63 mm dia (OD-63 mm) size HDPE pipe (PN8, PE 80 grade) ISI marked along with all accessories like socket, bend, couplers etc. conforming to ISI marked as per IS 4984:2016 with up to date amendment and technical specification with fitting and cutting, jointing etc. complete as required.	Mtr.	120	490.00	58800.00
30	Laying of of 63 mm dia (OD-63 mm) size HDPE pipe (PN8, PE 80 grade) DWC / HDPE ISI marked along with all accessory like socket, bend, coupler etc. complete with fitting and cutting joints 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.	Mtr.	120	135.00	16200.00
31	Providing of rectangular type chamber having size 2 meter x 1.5 meter x 1.5 meter including brick works with position cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) of size 2 meter x 1.5 meter x 20 cm in bottom for foundation and rectangular type RCC 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) cover on top having thickness of 15 cm and minor civil work such as plastering and finishing etc. as required.	Job	6	20000.00	120000.00
32	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size in the existing RCC/ HUME/ METAL/HDPE pipe as required.				
		Meter	20	30.00	600.00
(a)	Upto 35 Sqmm				
		Meter	2900	50.00	145000.00
(b)	Above 95 sq. mm and upto 185 sq. mm				

S. No.	Item Description	Unit	Qty.	Rate (Rs.)	Amount (Rs.)
33	Supplying and making straight through joint of following size heat shrinkable kit including ferrules and other jointing materials for following size of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1 KV grade as required.				
(a)	4 C x 185 Sqmm	Each	4	3000.00	12000.00
(b)	3.5 C x 150 Sqmm	Each	2	2354.00	4708.00
34	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.				
(a)	3 X 2.5 sq. mm (12/16 mm)	each	4	250.00	1000.00
(b)	4 X 16 sq. mm (28mm)	each	2	250.00	500.00
(c)	3.5 X 150 sq. mm (50 mm)	each	5	450.00	2250.00
(d)	4 X 185 sq. mm (57 mm)	each	4	550.00	2200.00
(e)	3.5 X 35 sq. mm (32 mm)	each	4	350.00	1400.00
	SH V: EARTHING WORKS				
35	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.	Each	4	6500.00	26000.00
36	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 etc. as required.	Meter	15	500.00	7500.00
37	Providing and fixing 25 mm X 5 mm G.I. strip on surface or in recess for connections etc. as required.	Meter	15	180.00	2700.00
	Lightning Conductor				
38	Providing and fixing of lightning finial, made of 25 mm dia 300 mm long, copper tube, having single prong at top, with 85 mm dia 3mm thick copper base plate including holes etc. complete as required.	Each	2	3000.00	6000.00
39	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.	Each	2	15400.00	30800.00
40	Jointing copper / G.I. tape (with another copper/ G I tape, base of the final or any other metallic object) by riveting / nut bolting/ sweating and soldering etc. as required.	Each	2	100.00	200.00
41	Providing and fixing G.I. tape 20mm X 3 mm thick on parapet or surface of wall for lightning conductor complete as required. (For horizontal run)	Meter	30	120.00	3600.00

S. No.	Item Description	Unit	Qty.	Rate (Rs.)	Amount (Rs.)
42	Providing and fixing G.I. tape 20mm X 3 mm thick on parapet or surface of wall for lightning conductor complete as required. (For Vertical run)	Meter	15	135.00	2025.00
43	Providing and fixing testing joint, made of 20 mm X 3 mm thick G.I. strip, 125 mm long, with 4 nos. of G.I. bolts, nuts, chuck nuts and spring washers etc. complete as required.	Each	3	250.00	750.00
44	Providing and laying G.I. tape 32 mm X 6 mm from earth electrode in ground as required.	Meter	20	230.00	4600.00
SH-VI: AIR CONDITIONING WORKS					
45	Supply of 1.5 TR highly energy efficient, hi-wall mounted Split type inverter Air-conditioner with high ISEER, 5 star rating, dual inverter compressor, cordless remote, suitable for operation on 230 Volts +/- 10%, 50 Hz, single phase A.C. supply, having copper condenser coil, capable of performing cooling, dehumidifying, air circulating, filtering and ventilation complete etc. as required.	Nos	9	35500.00	319500.00
46	Installation, Testing & commissioning of indoor and outdoor 1.5 TR split Air conditioner units which includes mounting of indoor & outdoor unit including providing suitable size of MS angle type stand after preparing suitable height of PCC platform at their respective location along with laying of suitable size of refrigerant, UPVC drain pipeline with insulation & flexible PVC covering pipe up to 4 mtr. connecting both the units, leak testing of entire system, connecting both indoor and outdoor units with 4 core 2.5 sqmm PVC insulated flexible copper cable supplied with the unit, top up of refrigerant (if required), minor civil repairing work as per site requirement complete as required.	Job	9	2000.00	18000.00
47	Supply and laying of suitable size of refrigerant Pipe (suction / discharge pipeline) with insulation, UPVC drain pipeline with insulation & flexible PVC covering pipe for connecting both the units including supply and laying of 4 core 2.5 sqmm PVC insulated flexible copper cable.	Meter	4	900.00	3600.00
SH-VII: FADS & FIRE EXTINGUISHERS					
48	Supply and Installation of Microprocessor based 2 Zone non-expandable conventional fire alarm panel, should be equipped of 2 Zone capacity to take maximum 20 detections per Zone, reset function inbuilt and alarm & Fault Display by individual LEDs for each detector group. 240 volts AC power supply, automatic battery charges, 2 Nos. X 12 volt sealed maintenance free batteries sufficient for 12 hours normal working.	Each	1	11000.00	11000.00
49	Supply and Installation of 2 Channel Wireless auto dialer (GSM based) voice message. 40 (20+20) seconds voice recording. 9 nos. of tel./mobile 16 digit each. View numbers & user setting any time. Standard telephone key pads. Work with all types of GSM network. Easy menu based programming. 1 levels of password protected. Approved by various consultants.	Each	1	12400.00	12400.00
50	Supply and Installation of Conventional Type smoke Detector with LED indication, with mounting base complete etc. as required.	Each	4	1250.00	5000.00
51	Supply and Installation of Conventional Hooter complete etc. as required.	Each	1	2750.00	2750.00

