



इरकॉन इन्टरनेशनल लिमिटेड
नवरत्न कम्पनी
(भारत सरकार का उपक्रम)
IRCON INTERNATIONAL LIMITED
NAVRATNA COMPANY
(A Govt. of India Undertaking)
An Integrated Engineering and Construction Company



सोन भवन (प्रथम तल), दारोगा प्रसाद राय पथ, पटना - 800 001. फोन : 0612-2506446, 2506543

Sone Bhawan (First Floor), Daroga Prasad Rai Path, Patna - 800 001, Phone : 0612-2506446, 2506543

LOA No. IRCON/2066/RTR/ ELECT(G)/1/2023/02/LOA/119
(ORIGINAL)

Date 25.01.2024

Letter of Acceptance

M/s Kumar Enterprise,
Lemuabad, Pandarak,
Dist.-Patna, Bihar-803221
E-mail ID:bijay71kir@gmail.com

Kind Attn.: Shri Bijay Kumar

Sub: Design, Supply, Installation, Testing & Commissioning of electrical general works comprising of Outdoor/Indoor lighting, power supply arrangement for signalling gears, station buildings, platforms, platform shelters, FOBs, staff quarters in connection with Rampur Dumra-Tal-Rajendrapul: Additional Bridge and doubling project with electrification in Danapur Division of East Central Railways.

Ref: i. Tender No. IRCON/2066/RTR/ELECT(G)/1/2023/02 dated 30.11.2023
ii. Your Online offer regarding above tender (Bid ID 647984 dated 20.12.2023)
iii. Technical Bid opened on 21.12.2023
iv. Financial Bid opened on 17.01.2024

In reference to the subject work, we are pleased to inform you that Ircon International Limited have accepted your quoted offer at **12.75% below** the estimated cost for the subject work at a total value of ₹ 5,25,11,375.33 (Rupees Five Crore Twenty-Five Lakh Eleven Thousand Three Hundred Seventy-Five and Paise Thirty-Three Only) including GST @ 18% and all other tax and duties. Hence, you are requested to execute the work as per the BOQ attached at **Annexure "A"** with following terms and conditions:

1. Contractor shall be expected to mobilize on subject work and commence the same within **seven (7) days** from the date of issue of Letter of Acceptance (LOA).
2. **SCOPE OF WORK:**
The scope of work in the subject tender covers "Design, Supply, Installation, Testing & Commissioning of electrical general works comprising of Outdoor/Indoor lighting, power supply arrangement for signalling gears, station buildings, platforms, platform shelters, FOBs, staff quarters in connection with Rampur Dumra-Tal-Rajendrapul: Additional Bridge and doubling project with electrification in Danapur Division of East Central Railways" (Refer SCC Clause No. 4.0)
3. **COMPLETION PERIOD:**
The work is required to be completed within eighteen (18) months from the date of issue of the Letter of Acceptance (LOA) including monsoon period. The work has to be executed

पंजीकृत कार्यालय : सी-4, डिस्ट्रिक्ट सेंटर, साकेत, नई दिल्ली . 110017, भारत

Registered Office : C-4 District Centre, Saket, New Delhi - 110017 (INDIA)

Tel.: +91-11-29565666 Fax : +91-11-26854000 : E-mail : info@ircon.org : Web. : www.ircon.org

CIN : L45203DL1976GOI008171



in co-ordination with other agencies working on or near the project. (Refer SCC Clause No. 25.0)

4. WORK PROGRAM:

The contractor shall submit detailed work programme within 15 days of award of work as per Clause No. 16.0 of Special Conditions of Contract.

5. DEFECT LIABILITY PERIOD:

Defect Liability Period (DLP) will be twelve (12) months from the date of issue of completion certificate by the Engineer. The contractor shall maintain, rectify and make good at his own cost any defect/deficiencies, which may develop in the work or as notified by the Engineer during the defect liability period. (Refer SCC Clause No. 49.0).

6. INSURANCE:

You are requested to obtain necessary insurance cover and submit the insurance policies before commencement of work as per Clause No. 11.0 of SCC.

7. SHRAMIK KALYAN PORTAL:

The contractor shall apply for one time registration of his firm/company etc. on shramik kalyan portal with requisite details subsequent to issue of Letter of Acceptance. Firm shall fill the salient details of contract labours engaged in the contract and ensure updating of each wage payment to them on Shramik Kalyan Portal. (Refer SCC Clause No. 42.0)

8. CONTRACT AGREEMENT:

As per para 13.5 of SCC, the Contract Agreement shall be signed between the Contractor and IRCON INTERNATIONAL LIMITED within 28 days from the date of issue of LOA.

You shall submit a non-judicial Stamp Paper of ₹ 1,000.00 at your own cost and attend the office of Chief General Manager (Electrical), IRCON International Limited, 6th Floor, Sone Bhawan, Daroga Prasad Rai Path, Patna for signing of Contract Agreement.

9. PERFORMANCE SECURITY:

The contractor shall submit a Performance Guarantee in the form of irrevocable Bank Guarantee (BG) on the proforma annexed as Annexure -IX of SCC from any scheduled bank for an amount of ₹ 34,53,112.00 (5% (Five percent) of the contract value i.e., ₹ 26,25,569.00 as per clause 10.1.2 of SCC and additional performance bank guarantee of ₹ 8,27,543.00 as per clause 10.1.7 of SCC) within 21 days from the issue of LOA.

10. PAYMENT TERMS:

The payment shall be made by IRCON as specified in Clause No. 34.0 of Special Conditions of Contract.

11. RETENTION MONEY/SECURITY DEPOSIT:

Security Deposit shall be deducted @ 10% from the bill maximum upto 5% of contract value and will be released after satisfactory completion of defect liability period of twelve (12) months. (Refer SCC Clause No. 10.2)

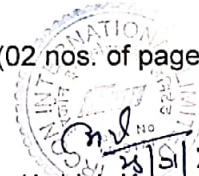
12. The conditions mentioned above in this LOA are a brief reference of the terms of the tender documents. All other terms and conditions shall be as per the NIT, Tender Documents accepted by you, which shall form an integral part of this contract and shall be binding on you.



13. This letter will constitute a legal and binding contract **between IRCON INTERNATIONAL LIMITED and M/s Kumar Enterprise, Lemuabad, Pandarak, Dist.-Patna, Barwadda, Bihar-803221** till completion of defect liability period.
14. You are requested to contact Sh. Praveen Kumar Dubey, AM/Electrical/MKA, IRCON International Limited for carrying out this work.

The letter of Acceptance (LOA) is being issued in marked "ORIGINAL" & "DUPLICATE" with an advice to return the "DUPLICATE" duly signed and stamped as a token of your acceptance.

- Enclosure:**
1. Annexure-A: Abstract of Cost (01 no. of page)
 2. Annexure-B: Bill of Quantities (17 nos. of page)
 3. Annexure-C: Form of Agreement (02 nos. of page)
 4. Annexure-D: Performance Bank Guarantee Format (02 nos. of page)



(Ashish Kumar Arya)

Chief General Manager/Electrical

For and on the behalf of,
IRCON INTERNATIONAL LIMITED

- Copy To:**
1. GM/Finance – For kind information and record please
 2. AM/Electrical /MKA – For kind information please

“Annexure-A”

ABSTRACT OF COST

Tender No.		IRCON/2066/RTR/ELECT(G)/1/2023/02 dated 30.11.2023			
Name of Work		Design, Supply, Installation, Testing & Commissioning of electrical general works comprising of Outdoor/Indoor lighting, power supply arrangement for signalling gears, station buildings, platforms, platform shelters, FOBs, staff quarters in connection with Rampur Dumra-Tal-Rajendrapul: Additional Bridge and doubling project with electrification in Danapur Division of East Central Railways.			
Name of Firm		M/s Kumar Enterprise, Lemuabad, Pandarak, Dist.-Patna, Bihar-803221 E-mail ID:bijay71kir@gmail.com			
S.N.	Description	Estimated Cost (Inclusive of 18% GST)	Quoted Rates		
			"Excess" or "Below" or "At Par"	% in Figures	Total Quoted Cost (Inclusive of 18% GST)
1.	Design, Supply, Installation, Testing & Commissioning of electrical general works comprising of Outdoor/Indoor lighting, power supply arrangement for signalling gears, station buildings, platforms, platform shelters, FOBs, staff quarters in connection with Rampur Dumra-Tal-Rajendrapul: Additional Bridge and doubling project with electrification in Danapur Division of East Central Railways.	₹6,01,84,957.40	Below	12.75%	₹5,25,11,375.33
2.	Grand Total	-	-	-	₹5,25,11,375.33
Grand Total (in words): Rupees Five Crore Twenty-Five Lakh Eleven Thousand Three Hundred Seventy-Five and Paise Thirty-Three Only					

(Signature)

ELECTRICAL GENERAL SERVICES WORK OF RAMPUR DUMRA-TAL-RAJENDRA PUL: ADDITIONAL BRIDGE & DOUBLING				
BILL OF QUANTITY				
SUMMARY				
S.N.	Sch. No.	SOR/NON-SOR	Description of Schedule	Amount
1	A	Non-SOR	Survey and Design	₹3,41,612.50
2	B	Non-SOR	Internal Electrification Works	₹15,44,871.42
3	C	Non-SOR	Luminaries, Fan, AC & Pump Set	₹1,01,10,262.01
4	D	Non-SOR	Earthing Arrangement	₹2,45,190.18
5	E	Non-SOR	L.T. Switch Boards and Feeder Panels	₹14,34,630.73
6	F	Non-SOR	L.T. and H.T. Cables	₹2,12,33,618.39
7	G	Non-SOR	L.T. and H.T. Overhead Lines	₹17,20,788.97
8	H	Non-SOR	Power Supply Arrangement	₹22,89,922.00
9	I	Non-SOR	Technical Consultant & Road Vehicles	₹1,20,83,305.09
Total Amount (Excluding GST) =				₹5,10,04,201.28
GST @ 18% =				₹91,80,756.23
Total Amount (Including GST) =				₹6,01,84,957.51



ELECTRICAL GENERAL SERVICES WORK OF RAMPUR DUMRA-TAL-RAJENDRA PUL: ADDITIONAL BRIDGE & DOUBLING					
BILL OF QUANTITY					
Schedule - A: SURVEY AND DESIGN					
Item No.	Description	Unit	Rate	Quantity	Amount
A	B	C	D	E	F=D*E
A.1	Design and Preparation of working & completion drawings of all HT/LT electrical installations of the complete project section where work is carried out such as platform lighting, internal electrification of staff quarters, level crossings, station building, offices, power line crossings, power supply distribution arrangements of stations/sub-stations, electrification of sub-station buildings etc & approval from the competent authority.	Job	₹1,90,901.79	1	₹1,90,901.79
A.2	Conducting check survey of the complete project section to compile details of all the existing LT, HT and EHT Power line Electrical overhead and underground power /telegraphic/other lines running along or across the track and recording measurements of horizontal distances of structures from the existing & proposed tracks, vertical clearance of conductors & guard wire from rail level, angle of crossings w.r.t. track, height and type of towers/poles and preparation of lists as below:	Job	₹1,50,710.71	1	₹1,50,710.71
	i. List of Overhead/Underground Crossings infringing and requiring modification. Proposed modification may also be indicated				
	ii. List of Overhead/Underground Parallel Alignments infringing and requiring modification. Proposed modification may also be indicated.				
Total Amount of Schedule-A (Excluding GST) =					₹3,41,612.50

32

ELECTRICAL GENERAL SERVICES WORK OF RAMPUR DUMRA-TAL-RAJENDRA PUL: ADDITIONAL BRIDGE & DOUBLING					
BILL OF QUANTITY					
Schedule – B: INTERNAL ELECTRIFICATION WORKS					
Item No.	Description	Unit	Rate	Quantity	Amount
A	B	C	D	E	F=D*E
B.1	Wiring of Light/ Fan/ 5A plug point (excluding metallic switch box & sheet but including switches, sockets, lamp holders/ceiling roses etc) with 1.5sq. mm. PVC insulated cable FRLS with copper multistrand conductor ISI marked 1100V grade conforming to IS 94/1990 in concealed rigid P.V.C. conduit (HMS) ISI marked of suitable size using modular accessories and 1.5sq. mm. PVC insulated FRLS copper earth continuity conductor of green colour inside conduit, screwless connector for joints etc. as required as per specification. In case ceiling/beam/column where cutting is not allowed wiring to be done in open conduit/casing capping by use of drill & roll plug.	Each	₹830.00	760	₹6,30,800.00
B.2	Supplying and fixing factory fabricated hot dip galvanized switch box for normal flush type accessories of minimum 1.2 mm thickness for up to 200mmx250mm size boxes and 1.6mm minimum thickness for higher size boxes, earth terminal stud with nut and washer, including 3 mm thick synthetic phenolic resin bonded laminated sheet conforming to grade P-I of IS:2036-1974 on surface/concealed including all necessary accessories, painting etc. as required as per specification				
	i. Size 6"x4"x3"	Each	₹263.56	8	₹2,108.47
	ii. Size 8"x6"x3"	Each	₹307.63	120	₹36,915.25
	iii. Size 8"x12"x3"	Each	₹444.92	120	₹53,389.83



**ELECTRICAL GENERAL SERVICES WORK OF RAMPUR DUMRA-TAL-RAJENDRA PUL:
ADDITIONAL BRIDGE & DOUBLING**

BILL OF QUANTITY

Schedule – B: INTERNAL ELECTRIFICATION WORKS

Item No.	Description	Unit	Rate	Quantity	Amount
A	B	C	D	E	F=D*E
B.3	Supply, fixing, connection & testing of 3 Pin 16 Amp. socket outlet point with 4 sq.mm. PVC insulated cable FRLS with copper multi strand conductor ISI marked in concealed rigid P.V.C. conduit (HMS) ISI marked of suitable size etc. with 16 Amp. switch & socket 20/16/6 Amp. Combined with fuse and light indicator using modular accessories of ISI marked and 4 sq.mm. PVC insulated FRLS copper earth continuity conductor of green colour inside conduit, screwless connector for joints as per specification	Each	₹217.00	120	₹26,040.00
B.4	Supplying & fixing of approved make Industrial type metal plug & socket DBs SPN sheet encloser (dust protected) inclusive of 2 pole and earth metal plug and socket and 2 nos. 20A SP MCB complete as per specification (Tripping characteristics conforming to IS-8828 AND BS-3871 PART - I, II)	Each	₹1,447.32	40.00	₹57,892.86
B.5	Supply, fixing, connection & testing of 4 way (4+12) TPN MCB DB of approved make with four pole, 415 V, 63 Amp isolator of approved make conforming to IS:13947-Part III :1993 & IEC:60947- 3:2001 and ISI marked and accepted standard of miniature circuit breaker (MCB) of 'C' series with short circuit indication, suitable for 240/415 Volts, 50 Cycle, 6A to 32A, 10kA/15 kA Value AC supply conforming to IS : 8828 : 1996, IEC : 60898 :2002 & 60947-2	Each	₹7,318.75	16	₹1,17,100.00
B.6	Wiring of circuit/ submain along with earth wire with the following sizes of FRLS PVC insulated copper multi- Strand conductor ISI Marked, 1100 V grade conforming to IS-694-1990, single core cable in surface/recessed medium class conduit as required as per specification				
	i. 2 x 2.5 sq.mm + 1* 1.5 sq.mm earth wire	Metre	₹208.04	800	₹1,66,428.57
	ii. 2 x 4 sq.mm + 1* 4 sq.mm earth wire	Metre	₹298.21	400	₹1,19,285.71
	iii. 2 x 6 sq.mm + 1* 6 sq.mm earth wire	Metre	₹391.96	400	₹1,56,785.71
	iv. 2 x 10 sq.mm + 1* 6 sq.mm earth wire	Metre	₹508.93	350	₹1,78,125.00
	Total Amount of Schedule-B (Excluding GST) =				₹15,44,871.42

ELECTRICAL GENERAL SERVICES WORK OF RAMPUR DUMRA-TAL-RAJENDRA PUL: ADDITIONAL BRIDGE & DOUBLING					
BILL OF QUANTITY					
Schedule – C: LUMINARIES, FANS, AC, PUMP SET					
Item No.	Description	Unit	Rate	Quantity	Amount
A	B	C	D	E	F=D*E
C.1	Supply and fixing Led tube rod comprising of LED tube (Tube light LED 1 X 18Watt, Integral i/c batten aluminium body, PC diffuser) with non-integral/integral driver, upto 6500K color temp having 40000 burning hrs life with minimum @ L 70, system lumen output should be minimum with system efficacy> 100 lm/Watt. LED driver PF> 0.95 & THD < 20%. The colour rendering index of LED light should be more than 70. Submission LM 79-08/IS16106 (2012), IEC60598, IEC61347i/c connection wire, testing etc. to complete the job	Each	₹713.00	208	₹1,48,304.00
C.2	Supplying, erection and testing of approved make air circulator circulator fan A.C. 230-250 volts with 3 blades, 600 mm sweep, speed regulator fan etc duly wired with all necessary material complete as required	Each	₹5,888.00	8	₹47,104.00
C.3	Supply, erection and testing of approved make electric 1400 mm sweep Ceiling fan of double ball bearing complete with standard down rod, canopy, hanging shackle, Aluminium blades, fan with regulator, A.C. 230-250 volts including connections with all necessary material complete of approved as required confirming to IS :374/2019 with upto date amendments	Each	₹2,635.00	128	₹3,37,280.00
C.4	Supply, Installation, Testing and Commissioning of AC unit, complete with LCD display cordless remote, min. 3-star energy rating, suitable for 1-Phase, 230 V +/- 10% AC supply including supply and installation of 2.0 Tonne split type, inverter type, wall mounted, IC controlled electronic auto voltage corrector	Each	₹66,201.79	4	₹2,64,807.14

**ELECTRICAL GENERAL SERVICES WORK OF RAMPUR DUMRA-TAL-RAJENDRA PUL:
ADDITIONAL BRIDGE & DOUBLING**

BILL OF QUANTITY

Schedule – C: LUMINARIES, FANS, AC, PUMP SET

Item No.	Description	Unit	Rate	Quantity	Amount
A	B	C	D	E	F=D*E
C.5	Supplying, erecting and testing of approved make 300mm sweep RPM 900 / 1400 exhaust fan with louver heavy duty with mounting frame, blades AC 230-250V complete connection and including, frame bolt/anchor hole fasteners etc. complete finished and as required.	Each	₹2,571.00	20	₹51,420.00
C.6	Supply & Erection of G.I Octagonal pole including digging of pit, making foundation with cement, sand & concrete in ratio 1:2:6, muffing, accommodating G.I pipe in foundation for cable loop-in-loop out of suitable size as required:				
	i. 7 meters long	Each	₹19,524.11	284	₹55,44,846.43
	ii. Additional cost of single arm bracket suitable for street light fixture.	Each	₹588.39	188	₹1,10,617.86
	iii. Additional cost of double arm bracket suitable for street light fixture.	Each	₹697.32	96	₹66,942.86
C.7	Supply, Erection, Testing and Commissioning of 45 W LED Street light fitting, pressure die-cast aluminium housing with toughened glass cover and IP 66 protection suitable to work on 220-240V AC supply	Each	₹6,735.71	400	₹26,94,285.71
C.8	Supply, Installation, testing and Commissioning of outdoor type, Double side Glow sign boards/Pictorial signage boards with suspension/side mounting/wall mounting type arrangements as required	Sq. ft	₹668.30	240	₹1,60,392.86
C.9	Supply, Installation, testing and Commissioning of 2 KVA ON LINE UPS, AC IN PUT-180-260 V 50 Hz OUT PUT Voltage-220 AC. Power regulation +/- 1%, Backup-120 Minutes. Power factor on full load-0.99 Battery voltage-72 Volt DC through 12 V 42 AH SMF Battery .Working Temperature 0-50 deg.C on non accumulative humidity up to 95 %. UPS installation with all required material arrangements as required as per IS specification	Each	₹60,958.72	4	₹2,43,834.87

ELECTRICAL GENERAL SERVICES WORK OF RAMPUR DUMRA-TAL-RAJENDRA PUL: ADDITIONAL BRIDGE & DOUBLING					
BILL OF QUANTITY					
Schedule – C: LUMINARIES, FANS, AC, PUMP SET					
Item No.	Description	Unit	Rate	Quantity	Amount
A	B	C	D	E	F=D*E
C.10	Supply and fixing of corrugated PVC flexible pipe size 1"/3"/4" dia from existing cable connection main switch for cable loop protection.	Meter	₹5.64	50	₹281.86
C.11	Supplying and fixing of 19mm/20mm dia. GI (IS marked) pipe 1 meter in length for CFL/LED streetlight/bulkhead/water tight bracket including bending to shape as required	Each	₹256.09	50	₹12,804.43
C.12	Supply, installation, testing and commissioning of 7.5 HP submersible pump set suitable to operate on 3 phase, 415V, 50Hz AC supply along with control panel etc. complete for supplying water at suitable discharge and head as per site requirement	Job	₹1,06,835.00	4	₹4,27,340.00
Total Amount of Schedule-C (Excluding GST) =					₹1,01,10,262.01

ELECTRICAL GENERAL SERVICES WORK OF RAMPUR DUMRA-TAL-RAJENDRA PUL: ADDITIONAL BRIDGE & DOUBLING					
BILL OF QUANTITY					
Schedule – D: EARTHING ARRANGEMENT					
Item No.	Description	Unit	Rate	Quantity	Amount
A	B	C	D	E	F=D*E
D.1	Earthing with 3m long, 50mm dia, G.I. pipe class 'B' earth electrode, adding the charcoal or coke and salt, providing concrete enclosure and MS cover plate with lifting arrangement etc. including connections with 4mm G.I. wire from earth electrode to switch board / electrical equipment as required	Each	₹3,322.32	69	₹2,29,240.18
D.2	Supply and laying 50mm X 6mm G.I. strip at 0.5 metre below ground level/surface as strip earth electrode including jointing etc. as required	Metre	₹319.00	50	₹15,950.00
Total Amount of Schedule-D (Excluding GST) =					₹2,45,190.18


 For the purpose of
 the contract

ELECTRICAL GENERAL SERVICES WORK OF RAMPUR DUMRA-TAL-RAJENDRA PUL: ADDITIONAL BRIDGE & DOUBLING					
BILL OF QUANTITY					
Schedule – E: L.T. SWITCH BOARDS AND FEEDER PANEL					
Item No.	Description	Unit	Rate	Quantity	Amount
A	B	C	D	E	F=D*E
E.1	Supply and fixing DP sheet steel enclosure on surface/recess along with 32 Amp., 240 V, "C" curve DP MCB conforming to IS : 8828 :1996, IEC : 60898 :2002 & 60947-2complete with connections, testing and commissioning etc. as required	Each	₹1,169.00	20	₹23,380.00
E.2	Supply and fixing DP sheet steel enclosure on surface/recess along with 63 Amp., 240 V, "C" curve DP MCB conforming to IS : 8828 :1996, IEC : 60898 :2002 & 60947-2complete with connections, testing and commissioning etc. as required	Each	₹2,401.00	12	₹28,812.00
E.3	Supply, Erection, Testing and Commissioning of control and distribution panel for Color Light Signal (CLS) supply in 25 kV traction system as per RDSO technical specification no. TI/SPC/PSI/CLS/0020 (12/02) A&C slips no. 1 to 4 or latest, connections as required for 10KVA AT	Each	₹90,418.75	6	₹5,42,512.50
E.4	Supply, installation, testing and commissioning of cubical type, wall mounted, dust & vermin proof, L.T. switch board 125 Amp comprising of the items indicated as under i. Incoming MCCB 125A, 4 pole, 35kA, fixed type (Ics=100%Icu) -1 No. ii. Outgoing MCCB 63A, 25kA, fixed type (Ics=100% Icu) - 4 Nos. iii. Outgoing MCCB 40A, 25kA, fixed type (Ics=100% Icu) - 4 Nos. iv. Outgoing MCB 32A, double pole, 10kA – 4 Nos. v. Outgoing MCB 32A, Single pole, 10kA - 4 Nos. vi. Sleeved/Epoxy coated copper bus-bar 250 A in bus bar Chamber vii. CT's Indication lights	Each	₹1,05,965.18	2	₹2,11,930.36



**ELECTRICAL GENERAL SERVICES WORK OF RAMPUR DUMRA-TAL-RAJENDRA PUL:
ADDITIONAL BRIDGE & DOUBLING**

BILL OF QUANTITY

Schedule – E: L.T. SWITCH BOARDS AND FEEDER PANEL

Item No.	Description	Unit	Rate	Quantity	Amount
A	B	C	D	E	F=D*E
E.5	Supply, installation, testing & commissioning of floor mounted cubical type 'G' Frame MCCB's Distribution panel Board conforms to IS 8623, IEC 439 complete with 400A copper busbar consisting the following i. Incoming MCCB 400A, 4 pole, 35kA, fixed type (Ics=100%Icu) -1 No. ii. Outgoing MCCB 100A, 16kA, 4 pole (WSN) -2 nos. iii. Outgoing MCCB 63A, 16kA, 4 pole (WSN) -6 nos. iv. Cable alley : 2x8 way v. Digital voltmeter (0-500v) with selector switch-1 no. vi. Digital ammeter (0-400A) with selector switch -1 no. vii. L.E.D. indication lamp (R.Y.B.) - 3 nos.	Each	₹1,41,573.50	3	₹4,24,720.49
E.6	Supply, installation, testing & commissioning of floor mounted cubical type 'G' Frame MCCB's Distribution panel Board conforms to IS 8623, IEC 439 complete with 400A copper busbar consisting the following i. Incoming MCCB 400A, 4 pole, 35kA, fixed type (Ics=100%Icu) -1 No. ii. Outgoing MCCB 125A,16kA, 4 pole (WSN) -2 nos. iii. Outgoing MCCB 63A,16kA, 4 pole (WSN) -6 nos. iv. Cable alley : 2x8 way v. Digital voltmeter (0-500v) with selector switch-1 no. vi. Digital ammeter (0-400A) with selector switch -1 no. vii. L.E.D. indication lamp (R.Y.B.) - 3 nos.	Each	₹1,43,661.50	1	₹1,43,661.50
E.7	Fabrication supply fixing and commissioning of cable terminal board fully enclosed in MS sheet of 16 swg thickness all enclosed with painted dust and vermin proof water entry protected, laying provision of 3/2 entry with rubber bushing for incoming cable of all sizes of 4 core 70 sq.mm power cable with 200amp galvenised copper bus bar and 63amp no kitkat fuse grip etc.	Each	₹1,650.89	15	₹24,763.28

ELECTRICAL GENERAL SERVICES WORK OF RAMPUR DUMRA-TAL-RAJENDRA PUL: ADDITIONAL BRIDGE & DOUBLING					
BILL OF QUANTITY					
Schedule – E: L.T. SWITCH BOARDS AND FEEDER PANEL					
Item No.	Description	Unit	Rate	Quantity	Amount
A	B	C	D	E	F=D*E
E.8	Supply, installation, testing & commissioning of ISI Marked Change over switches in sheet enclosure confirming to IS : 4064 / IS : 13947 (part I & III) with side handle operated 4 pole with two earthing terminals	Each	₹2,571.35	4	₹10,285.42
E.9	Supply, fixing, connection and testing of 4 Way MCB DB with 6A SP MCB-4Nos and 20A SP MCB- 4Nos. complete with sheet metal enclosure with all accessories etc. (Including cutting of wall and making good the damages).	Each	₹1,023.55	24	₹24,565.18
Total Amount of Schedule-E (Excluding GST) =					₹14,34,630.73




**ELECTRICAL GENERAL SERVICES WORK OF RAMPUR DUMRA-TAL-RAJENDRA PUL:
ADDITIONAL BRIDGE & DOUBLING**

ESTIMATE OF QUANTITIES

Schedule – F: L.T. AND H.T. CABLE WORKS

Item No.	Description	Unit	Rate	Quantity	Amount
A	B	C	D	E	F=D*E
F.1	Supply and delivery of XLPE insulated power cable (conforming IS-7098 Part-I) 1100 Volt grade, ISI marked with alu. stranded /solid conductor				
	i. Armoured 1 core, 16 sq.mm.	Metre	₹82.00	6500	₹5,33,000.00
	ii. Armoured 2 core, 10 sq.mm.	Metre	₹121.00	8000	₹9,68,000.00
	iii. Armoured 2 core, 16 sq.mm.	Metre	₹131.00	8500	₹11,13,500.00
	iv. Armoured 2 core, 25 sq.mm.	Metre	₹350.00	4000	₹14,00,000.00
	v. Armoured 2 core, 70 sq.mm.	Metre	₹597.32	7000	₹41,81,250.00
	vi. Armoured 4 core, 35 sq.mm.	Metre	₹358.00	2000	₹7,16,000.00
	vii. Armoured 4 core, 150 sq.mm.	Metre	₹1,175.00	2600	₹30,55,000.00
F.2	Supply and delivery of XLPE insulated FRLS heavy duty power cable conforming IS-7098 (Part-1) 1988, 1100 Volt grade,armoured 2 core, 4 sq.mm ISI marked with copper stranded/solid conductor.	Metre	₹183.00	1000	₹1,83,000.00
F.3	Laying of one number armoured /unarmoured cable 1.1.KV grade of different size direct in ground including excavation in all soil/murum /soft rock, brick work,sand cushioning protective coveringand refilling the pit /under road by laying of G.I pipe at a depth not less than 1m/in existing masonry trench/cable tray/fixed on wall post with suitable MS flat 35x6mm clamp and saddle including supply and fixing suitable end termination with cable glang and aluminium lugs etc. as required.	Metre	₹266.00	24100	₹64,10,600.00
F.4	Laying of one number additional armoured / unarmoured power cable 1.1KV grade of size not exceeding 400 sq.mm. in ground in the same trench in one tier horizontal formation including additional cable excavation, sand cushioning, protective covering and refilling the pit etc. as required	Metre	₹159.00	11500	₹18,28,500.00
F.5	Supply and Laying of HDPE pipe (Outer Dia. 63 mm) as per IS: 4984-1995 (PN-4/PE-80, with minimum wall thickness of 6.2mm) under the Railway track with trenchless boring method, Laying of cable and making good the damage as required.	Metre	₹1,251.79	500	₹6,25,892.86

ELECTRICAL GENERAL SERVICES WORK OF RAMPUR DUMRA-TAL-RAJENDRA PUL: ADDITIONAL BRIDGE & DOUBLING					
ESTIMATE OF QUANTITIES					
Schedule – F: L.T. AND H.T. CABLE WORKS					
Item No.	Description	Unit	Rate	Quantity	Amount
A	B	C	D	E	F=D*E
F.6	Supply & fixing cable route marker round/square size 100mm, 5mm. Thick, G.I. Plate duly bolted/welded on 35mm x 35mm x 5mm angle iron 60cm long including excavation, grouting in cement concrete 1:2:4 (1cement and 2 coarse sand: 4 graded stone aggregate 20mm nominal size) foundation of size 20cm x 20cm x 30cm duly embedded in ground 30cm depth or as required	Each	₹299.00	100	₹29,900.00
F.7	Supply, delivery & installing of 50 mm Class 'B' G.I. pipe ISI marked (IS-1161-68) for protection of underground cable fixed on wall/support/in trench/fixed between two rigid existing support of wall/beam for erection of ceiling Fan/down rod for stiff pendent for light luminaries/fan/protective for earthing, lightening conductor down strip/overhead service line/for submersible cable or centrifugal pump for water supply with necessary iron clamp coupler, bend, tee, elbow, nuts and bolts etc. complete in an approved manner as required to complete excluding cost of excavation/dismantling & other finished masonry Item complete.	Metre	₹550.00	192	₹1,05,600.00
F.8	Supply, delivery and making of straight through joint with 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				
	i. 2 Core, 10-16 sq.mm	Each	₹1,935.71	10	₹19,357.14
	ii. 2 Core, 25-50 sq.mm	Each	₹2,212.50	10	₹22,125.00
	iii. 2 Core, 70-150 sq.mm	Each	₹1,536.00	5	₹7,680.00
	iv. 4 Core, 25-50 sq.mm	Each	₹3,002.68	5	₹15,013.39
	v. 4 Core, 70-150 sq.mm	Each	₹3,840.00	5	₹19,200.00
Total Amount of Schedule-F (Excluding GST) =					₹2,12,33,618.39




**ELECTRICAL GENERAL SERVICES WORK OF RAMPUR DUMRA-TAL-RAJENDRA PUL:
ADDITIONAL BRIDGE & DOUBLING**

BILL OF QUANTITY

Schedule – G: L.T. AND H.T. OVERHEAD LINES

Item No.	Description	Unit	Rate	Quantity	Amount
A	B	C	D	E	F=D*E
G.1	Supply and delivery of Pre-Stressed Cement Concrete (PSCC) pole (400 kg) conforming to IS: 785	Each	₹3,407.27	10	₹34,072.67
G.2	Erection of PSCC pole length upto 2 metres in cement concrete M-10 (1cement:3coarse sand:6 graded stone aggregate 40mm nominal size) foundation with cement concrete collar of size 0.4 metres to accommodate the looping type cable end box including excavation and refilling etc. as required.	Each	₹6,619.64	10	₹66,196.43
G.3	line rail pole (52 kg/metre), 13 metre long of I.S. standard including base plate, welding, drilling of required hole etc. complete as required.	Each	₹52,819.00	10	₹5,28,190.00
G.4	Scratching, cleaning, painting and erection of rail pole 13 metre long by means of concrete in cement concrete M-10 (1 cement:3 core sand: 6 graded stone aggregate 40mm nominal size) base, foundation, muffing including excavation and back refilling etc. The painting will be done two coat of red oxide followed by two coats of aluminium paints. The paint should be approved make and brand including cost of all materials and labour in total.	Each	₹7,973.70	10	₹79,736.95
G.5	Supply and erection of bow stay set complete (galvanized) 19mm. dia x 1.8 metre long stay rod anchor plate of size 300 mm x 300 mm x7.5mm (galvanized) thimble stay clamp, turn buckle (19mm dia x 600mm), 7/4.00mm dia G.I. stay wire etc. in cement concrete M-10 (1 Cement: 3 Coarse sand: 6 graded stone aggregate 40mm nominal size) foundation including excavation and refilling etc. as required.	Each	₹4,947.00	24	₹1,18,728.00

ELECTRICAL GENERAL SERVICES WORK OF RAMPUR DUMRA-TAL-RAJENDRA PUL: ADDITIONAL BRIDGE & DOUBLING					
BILL OF QUANTITY					
Schedule – G: L.T. AND H.T. OVERHEAD LINES					
Item No.	Description	Unit	Rate	Quantity	Amount
A	B	C	D	E	F=D*E
G.6	Supply, fabrication and erection of angle/channel/flat iron fitting for overhead line & sub-station etc such as 'D' bracket, cross arms, top clamp, 'V' cross arms, back/support clamp or other similar work etc. including nut bolts of required size, making holes, fabrication, welding, cutting, etc. and painting with one coat of red oxide paint & two coat of aluminium paint as required as per specification	Kg	₹105.00	2000	₹2,10,000.00
G.7	Supplying and erection of 11kV porcelain pin/shackle insulator complete with long steel head G.I. pin, nut,washer etc. as required.	Each	₹92.00	51	₹4,692.00
G.8	Supplying and erection of 11kV porcelain pin porcelain insulator complete with long steel head G.I. pin, nut,washer etc. as required.	Each	₹375.00	36	₹13,500.00
G.9	Supply and Erection of 11kV Porcelain Disc insulator complete with galvanised iron hardware etc. including terminating with 11kV / 33kV overhead Conductor	Each	₹1,465.18	27	₹39,559.82
G.10	Supplying and drawing of stranded aluminium conductor steel reinforced (ACSR) 0.05 sq inch (55 sq.mm Al. EQ.)- (Rabbit) conforming to IS:398-1976 of approved make, stringing, making off complete with binding at existing insulator, jointing, jumpering, tearing off, connecting etc. as required and clearing of obstacles (if any) etc.	Km	₹64,148.00	5	₹3,20,740.00
G.11	Supplying and erection of single piece nonlinear resistor type lighting arrester (set of 3 nos) for 3 wire, 11KV overhead lines/sub-station with rated voltage of 9KV (rms) with a nominal discharge current rating of 5 KA and complete with galvanized clamping arrangement, G.I. bolts, nuts, washer etc. as required	Set	₹3,832.00	4	₹15,328.00
G.12	Supply, Erection, Testing and Commissioning of 3-pole, 11kV, 400A, gang operated switch complete with drop out fuses etc. as required.	Set	₹39,543.75	4	₹1,58,175.00


 25/05/2024
 1

ELECTRICAL GENERAL SERVICES WORK OF RAMPUR DUMRA-TAL-RAJENDRA PUL: ADDITIONAL BRIDGE & DOUBLING					
BILL OF QUANTITY					
Schedule – G: L.T. AND H.T. OVERHEAD LINES					
Item No.	Description	Unit	Rate	Quantity	Amount
A	B	C	D	E	F=D*E
G.13	Supplying and fixing 33/11/0.4 kV enamel coated danger board size 200x250mm with clamp on HT/LT structure/poles.	Each	₹205.00	27	₹5,535.00
G.14	Dismantling of existing H- Beam/RS Joist/PCC/Rail pole i/c accessories such as cross arms, top clamp, V-cross arms, strut, stay, luminary etc. & conductor/cable/guarding span complete including accountal, stocking, transport and handing over the released materials to railway's authorized official as instructed by the Engineer and making temporary arrangements if required.	Each Pole	₹1,457.00	30	₹43,710.00
G.15	Co-ordination/ liasoning and chasing with State Utility Company for availing new electrical connection/augmentation of sanctioned load at stations, level crossings etc. including applying for load, collection of estimates for loads, modification of power line crossings, arranging payment from IRCON, depositing payment to State Utility Company, arranging release of load & other related works, payment to be made to SEB for new connection, load augmentation, modification of power line crossings etc. shall be made by IRCON	Each Location	₹9,262.50	4	₹37,050.00
G.16	Supplying and drawing guard wire/earth wire/bearer wire 18.62 sq mm (4.87mm. dia/6swg) G.I. including stringing, binding at existing insulators or brackets, jointing, jumpering, connecting & cradle etc. as required and clearing of obstacles (if any)	Km	₹18,761.00	2	₹37,522.00
G.17	Trimming and cutting of tree branches from different location/sites as per the site requirement in various situation by manual or through machines according to the condition of tree	Job	₹1,610.62	5	₹8,053.10
Total Amount of Schedule-G (Excluding GST) =					₹17,20,788.97

32

ELECTRICAL GENERAL SERVICES WORK OF RAMPUR DUMRA-TAL-RAJENDRA PUL: ADDITIONAL BRIDGE & DOUBLING					
BILL OF QUANTITY					
Schedule – H: POWER SUPPLY ARRANGEMENT					
Item No.	Description	Unit	Rate	Quantity	Amount
A	B	C	D	E	F=D*E
H.1	Supplying, installing, testing and commissioning of 11/0.4 KV, 100kVA, 3 Phase, 50 cycle, oil immersed, outdoor type Delta/Star connected, copper wound, DYn11, ONAN cooled, power distribution transformer (outdoor type) conforming to IS:1180 (Energy Efficiency level shall not be less than-II) with dehydrating silica gel breather on eye level, rating and diagram plate, two earthing terminal, lifting lugs, oil level gauge, drain valve with plug, temperature not exceeding 50 degree Celsius on load, oil filling hole with plug, four unidirectional roller, arcing horns, explosion vent, terminal arrangement bushing on H.V. side and cable box on LV side, first filling of oil upto desired level and transformer installing on existing structure with all required materials arrangement as required ISI marked & as per IS specification, hand operated off load tap changer switch above 100 KVA, oil conservator with drain valve, plug 63 KVA and above	Each	₹3,39,276.79	4	₹13,57,107.14
	i. Extra for construction of foundation for transformer installation as required.	CUM	₹7,022.32	12	₹84,267.86
H.2	Supply, installation, testing and commissioning of three phase, 62.5 KVA, 415V, 'Silent Type' diesel generating set comprising with diesel engine water cooled, Synchronous alternator, AMF control panel single/three phase, acoustic enclosure, battery with charger and related accessories including PCC 1:2:4 platform, incoming cable 10 mtr, earthing Cu/GI plate 2No/2No, exhaust pipe 'B' class with insulation as per CPWD specification and CPCB - II Norms	Each	₹8,48,547.00	1	₹8,48,547.00
Total Amount of Schedule-H (Excluding GST) =					₹22,89,922.00


 20/04/2024
 10:00 AM
 10/04/2024

ELECTRICAL GENERAL SERVICES WORK OF RAMPUR DUMRA-TAL-RAJENDRA PUL: ADDITIONAL BRIDGE & DOUBLING						
BILL OF QUANTITY						
Schedule-I: Technical Consultant & Road Vehicles						
S.N.	Description	Unit	Personne l/ Month	Months	Rate	Amount
A	B	C	D	E	F	G=D*E*F
I.1 Technical consultants						
I.1.1	Resident Engineer (Electrical / Mechanical) for OHE / PSI / GS/ TSS / SCADA works)	Man Month	1	18	₹1,53,980.48	₹27,71,648.55
I.1.2	Electrical Expert for OHE / PSI / GS/ TSS / SCADA works)	Man Month	1	18	₹99,634.43	₹17,93,419.65
I.1.3	Supervisor Electrical (OHE/ PSI/ GS/ TSS/ SCADA)	Man Month	1	18	₹75,974.34	₹13,67,538.06
I.1.4	Computer/AutoCAD Operator	Man Month	1	18	₹32,425.58	₹5,83,660.44
I.1.5	Office Peon/ Office Boy/ MTS	Man Month	1	18	₹29,673.60	₹5,34,124.80
I.2 Site Facilities						
I.2.1	Provision of one dedicated Vehicle for movement (7 seater passenger SUV) for movement of IRCON Electrical Engineers on project site. Registration of vehicle shall not be earlier than Jan 2023. All cost such as fuel, maintenance, Driver's salary, fooding & lodging, Insurance, Toll charges shall be borne by the contractor. Vehicle must be available 24x7 along with driver. Per month limit of vehicle for Running of Vehicle is 4000 Kms. For extra km, Rs. 18 per km will be paid extra.	Vehicle Month	2	36	₹69,901.58	₹50,32,913.58
Total Amount of Schedule-I (Excluding GST) =						₹1,20,83,305.09



FORM OF AGREEMENT

(To be executed on requisite value of stamp Papers)

AGREEMENT

THIS AGREEMENT made on _____ day of _____ (Month/year) between IRCON International Limited, , Sone Bhawan (First Floor), Daroga Prasad Rai Path, Patna - 800001 acting through (Chief Project Manager/Railway Projects, Sone Bhawan (First Floor), Daroga Prasad Rai Path, Patna - 800001) (hereinafter called "the Employer/Engineer") of the one part and _____ (name and address of the Contractor) (hereinafter called "the Contractor") of the other part.

WHEREAS the Employer is desirous that certain works should be executed by the Contractor viz. **Contract No** IRCON/2066/RTR/ ELECT(G)/1/2023/02

/CA (hereinafter called "the Works", and has accepted a Bid by the Contractor for the execution and completion of such Works and the remedying of any defects therein.

NOW THIS AGREEMENT WITNESSETH as follows:

1. In this Agreement, words and expressions shall have the same meaning as are respectively assigned to them in the Conditions of Contract hereinafter referred to.
2. The following documents shall be deemed to form and be read and construed as part of this Agreement:
 - a. Agreement
 - b. Letter of Acceptance of Tender
 - c. Addendum(s)/Corrigendum(s), if any.
 - d. E-Procurement Notice
 - e. Instructions to the Tenderers
 - f. Appendix to Tender
 - g. Form of Bid
 - h. Special Conditions of the Contract
 - i. General Conditions of Contract
 - j. Drawings
 - k. Technical Specifications & Standards
 - l. Certificate of Familiarization
 - m. Safety, Health & Environment
 - n. Explanatory Notes
 - o. Bill of Quantity



3. In consideration of the payments to be made by the Employer to the Contractor as hereinafter mentioned, the Contractor hereby covenants with the Employer to execute and complete the Works and remedy any defects therein in conformity in all respects with the provisions of the Contract.
4. The Employer hereby covenants to pay the Contractor in consideration of the execution and completion of the Works and the remedying of defects therein the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

IN WITNESS whereof the parties hereto have caused this Agreement executed the day and year first before written.

(Name, Designation and address of the
authorized signatory)

(Name, Designation and address of the
authorized signatory)

Signed for and on behalf of the Contractor
in the presence of:

Signed for and on behalf of the Contractor
in the presence of:

Witness:

Witness:

1. Signature.....
Name.....
Address.....
.....
2. Signature.....
Name.....
Address.....
.....

1. Signature.....
Name.....
Address.....
.....
2. Signature.....
Name.....
Address.....
.....



PERFORMANCE BANK GUARANTEE (UNCONDITIONAL)

To

IRCON International

Limited,

[Acting through _____ (Project Incharge) & Address of the Project]

WHEREAS _____ [name and address of contractor] (hereinafter called "the Contractor") has undertaken, in pursuance of Contract No. _____ dated _____ to execute the work of " _____" [name of Contract and brief description of Works] (hereinafter called "the Contract.");

AND WHEREAS it has been stipulated by you in the said Contract that the contractor shall furnish you with a Bank Guarantee by a Scheduled Bank for the sum specified therein as security for compliance with his obligations in accordance with the Contract;

AND WHEREAS we have agreed to give the Contractor such a Bank Guarantee;

NOW THEREFORE we hereby affirm that we are the Guarantor and responsible to you, on behalf of the Contractor, up to a total of _____ [amount of Guarantee], _____ [amount in words], such sum being payable in the types and proportions of currencies in which the Contract Price is payable, and we unconditionally agree and undertake to pay you, without any demur or protest, at once, upon your first written demand and without cavil or argument, any sum or sums within the limits of _____ [amount of Guarantee] as mentioned in demand letter, without requiring you to prove or to show grounds or reasons for your such demand for the sum specified therein, in the first letter of invocation.

We hereby waive the necessity of your demanding the said debt from the Contractor before presenting us with the demand.

We further agree that no change or addition to or other modification of the terms of the Contract or of the Works to be performed there under or of any of the Contract documents which may be made between you and the Contractor shall in any way release us from any liability under this guarantee, and we hereby waive notice of any such change, addition or modification.

This guarantee shall be valid up to _____ (a date **60 days** from the date of completion of the work).

We, the _____ Bank further agree that this guarantee shall be invokable at our place of business at New Delhi/NCR/Project HQ (Indicate detail address of branch with Code No.). The branch at New Delhi/NCR/Project HQ is being advised accordingly.



This Bank Guarantee shall be operative only if it is accompanied by a separate advice sent by _____ (Name of Issuing Bank, with address) on _____ (Name of Employer's Bank, with address) IFS Code _____ through Structured Financial Messaging System (SFMS) and authenticated by the Employer's Bank.

SIGNATURE AND SEAL OF THE GUARANTOR

Name of Bank:

Address:

Date:

* The Bank should indicate detailed address of New Delhi/NCR/Project HQ branch along with its Code No



Signature Not Verified

Digitally signed by SHASHEEKANT
Date: 2024.01.27 13:55:03 IST
Location: eProcurement System for
Central PSUs