ESTATE (E & M) WORKS SECTION
INDIAN INSTITUTE OF TECHNOLOGY, KHARAGPUR

Notice Inviting Quotation

Quotation No: - IIT/E/E&M/2018-19/Qtn/78 Date: - 09.01.2019

Sealed quotations on item rate basis are invited by Sr. EE (EW) from enlisted and approved Electrical contractors of IIT Kharagpur/CPWD/MES/WBPWD/Kharagpur municipality and Other bonafide contractors having valid GST, PAN, Updated trade license and updated Electrical contractor license for below mentioned work. The approximate cost of the work is ₹**91,954**/-(Rupees Ninety one thousand Nine hundred Fifty four only)

NAME OF THE WORK	**:**	Electrical Renovation Work in CWISS, Transport & Automobile Section and Materials Science Centre etc under Institute Academic area at IIT Kharagpur.
ISSUE OF QUOTATION	:	**FROM 09.01.2019 to 23.01.2019**
LAST DATE OF SUBMISSION OF QUOTATION	**: -**	**23.01.2019 UPTO 3:30 PM**
QUOTATION OPENING DATE	: **-**	**23.01.2019 TIME: 4:30 PM**

TENDER DOCUMENTS can be downloaded from the Institute website www.iitkgp.ac.in & https://eprocure.gov.in. Requisite Earnest Money amounting to **Rs. 1840/- (Rupees One thousand Eight hundred Forty only)** to be paid by in demand draft in favour of "Indian Institute of Technology Kharagpur" on any nationalized Bank of India payable at Kharagpur Branch at the time of submission of Bid. **Tenders without Earnest Money shall be summarily rejected.** For any amendment /corrigendum please visit the Institute website www.iitkgp.ac.in & https://eprocure.gov.in.

The following documents to be submitted at the time of submission of bid:

i) GST
ii) PAN
iii) Work Completion Certificates justifying eligibility criteria
iv) Updated Electrical Contractor License
v) Updated Trade License
vi) Make list format to be submitted along with bid (Format enclosed).

Eligibility criteria:
Contractors who fulfill the following requirement shall be eligible to apply:

The bidder must have done at least ONE similar work of value of 80% of the estimated cost **or** TWO similar works for projects each of value 60% of the estimated cost **or** THREE similar work for projects each of value 40% of the estimated cost.

Sr. Executive Engineer (EW)

_____
Signature of contractor

Copy to:
1) Registrar, I.I.T Kharagpur.
2) Chief Engineer
3) Joint Registrar (S&P)
4) Dy. Registrar (F &A)
5) Superintending Engineer (Elect.)
6) Sr. Executive Engineer (Civil)
7) Sr. Executive Engineer (E&M)
8) Notice Board, EPDS.
9) Notice Board, Estate (E &M) Head office, Old Building
10) Office file.

_____
Signature of contractor

Tender Document

For

Name of work: Electrical Renovation Work in CWISS, Transport & Automobile Section and Materials Science Centre etc under Institute Academic area at IIT Kharagpur.

Sealed quotations on item rate basis are invited by Sr. EE (EW) from enlisted and approved Electrical contractors of IIT Kharagpur /CPWD/MES/WBPWD/Kharagpur municipality and Other bonafide contractors having valid GST, PAN, Updated trade License . The approximate cost of the work is **₹91,954/-**(Rupees Ninety one thousand Nine hundred Fifty four only)

The work to be completed within **30 (Thirty) days** from the date of acceptance of work order placed by IIT Kharagpur

1. The Bidders are required to complete quotation, quote rate as per the schedule of quantities and sign on each page of tender documents before submission. The quotation will not be accepted other than our format. The completed set is to be enclosed in a sealed envelope addressed to:

   Sr. Executive Engineer (EW).
   Indian Institute of Technology, Kharagpur
   Kharagpur -721302 (WB)

   Tenders will be received up to 3.30 PM on 23.01.2019 with all necessary documents i.e. GST, PAN, Electrical contractor license and updated Trade License in the office of Estate (E & M), Old Building, IIT Kharagpur.

   Agency has to submit the self-attested copy of the documents .Without these documents tender will not be accepted.

2. No tender will be received after the expiry of the date and time notified for receiving tenders under any circumstances whatsoever.

3. The tender will be opened at 4.30 PM on **23.01.2019** at above address in the presence of authorized representative of Bidder and Tender opening committee of IIT Kharagpur

4. Tender shall remain valid for acceptance for a period of 120 days from the notified last date of tender submission.

5. The price should be for the complete finished item of work and include all labour charges, material, taxes, overhead, duties, cess etc.

6. **Earnest Money, amounting to Rs. 1840/- (Rupees One thousand Eight hundred Forty only)** in Demand Draft in favour of " Indian Institute of Technology Kharagpur" on SBI, Kharagpur must accompany each tender and each tender is to be in a sealed cover **super scribed** with **, "Electrical Renovation Work in CWISS, Transport & Automobile Section and Materials Science Centre etc under Institute Academic area at IIT Kharagpur."** and the NIQ No. **IIT/E/E&M/2018-19/Qtn/78.**

7. The earnest money deposited shall not carry any interest and will be refunded to the unsuccessful tenderers. Earnest money paid by the successful contractor will be retained by the IIT Kharagpur as a part of security deposit.

8. Institute will deduct a sum at the rate of 10% of the gross amount of each running bill of the Contractor till the sum along with the sum already deposited as earnest money, will

_____

Signature of contractor

amount to security deposit of 10 % of the bid value of the work. Security deposit will be refunded to bidder after successful completion of warranty period of **Six month.**

9. All tenders in which any of the prescribed conditions are not fulfilled or incomplete in any respect are liable to be rejected.

10. The Institute reserves the right to reject any or all bid without assigning any reason .If any information furnished by the applicant is found incorrect at a later stage, he shall be debarred from tendering and taking up of any work in IIT Kharagpur.

11. The quantities given in BOQ against each items may vary i.e. increase or decrease as per site requirement, but rate will be firmed.

12. This tender notice shall form part of the contract documents.

13. Penalty will be imposed against delay of work as per the Institute rule.

14. The agency is fully responsible for the safety of working personnel and has to follow all government safety rules.

15. Tenderers are advised to inspect and examine the site and its surroundings and satisfy themselves before submitting their bids as to the nature of the ground and sub soil, laying route, the form and nature of site, the means to access the site, the accommodation they may require and in general shall themselves obtain all necessary information as to risk, contingencies and other circumstances which may influence or affect their tender. A bidder shall be deemed to have full knowledge of the site whether he inspects it or not and no extra charges consequent on any misunderstanding or otherwise shall be allowed. The bidder shall be responsible for arranging and maintaining at his own cost of materials, tools & plants, water, electricity access, facilities for workers and all other services required for executing the work unless otherwise specifically provided for in the bid documents. Submission of tender by a tenderer implies that he has read this notice and all other tender documents and has made himself aware of the scope and specifications of the work to be done and local conditions and other factors having bearing on the execution of the work.

16. All the Govt. labour rules, regulations and latest Indian Electricity Rule are followed by the contractor while executing the Electrical work.

17. All statuary deduction will be deducted as per government rules.

18. Rates quoted by the contractors in item rate tender in figures and words shall be accurately filled in so that there is no discrepancy in the rates written in figures, and in word. However, if a discrepancy is found the rates which correspond with the amount worked out by the contractor shall be taken as correct.
19. If the amount of an item is not worked out by the contractor or it does not correspond with the rate written either in figures or in words that the rate quote by the contractor in words should be taken as correct.
20. Where the rate quoted by the contractor in figures and in words tally but the amount is not worked out correctly, the rate quoted by the contractor will be taken as correct, not the amount.
21. The Tenderer whose tender is not accepted shall not be entitled to claim any costs, charges and expenses incidental to or incurred by him through or in connection with his submission of tender or its consideration by the Purchaser, even though the Purchaser may elect to modify/withdraw the Invitation to Tender or does not accept the tender.

_____

Signature of contractor

22. Bidders are requested to witness the bid opening.

Schedule of Quantities

Name of work: Electrical Renovation Work in CWISS, Transport & Automobile Section and Materials Science Centre etc under Institute Academic area at IIT Kharagpur.

Sl. No.	Description of Items	Unit	Qty.	Rate (`)	Amount (`)
1	Wiring for circuit / submain wiring alongwith earth wire with the following sizes of FRLS PVC insulated copper conductor , single core cable in surface / recessed medium class PVC conduit as required . Modular switch/ board et. : Make Crabtree, Legrand,Plyrius/ MK wraparound **Make (FRLS Wire):-** Finolex/RR Kabel/Polycab/ Havells/ KEI **Make (MMS Pipe):-** Presto plast/Precision/ AKG/Equivalent approved by Engineer-in Charge				
a)	2 X 2.5 sq mm + 1 X 2.5 sq mm for E.C.C	Mtr.	120		
b)	2 X 4 sq mm + 1 X 4 sq mm for E.C.C	Mtr.	20		
c)	2 X 6 sq mm + 1 X 6 sq mm for E.C.C	Mtr.	5		
d)	4 X 6 sq mm + 2 X 6 sq mm for E.C.C	Mtr.	10		
2	Supplying and fixing of following sizes of medium class PVC conduit along with accessories in surface / recess including cutting the wall and making good the same in case of recessed conduit as required. **Make (MMS Pipe):-**Presto plast/Precision/AKG/Equivalent approved by Engineer-in Charge				
a)	40 mm	Mtr.	30		
3	Supplying and fixing following sizes / modules ,GI box along with modular base & cover plate for modular switches in recess etc as required . **Make:-** Crabtree Thames platinum range/Wipro Nova/Legrand Myrius range/MK (Wraparound Plus)/Equivalent approved by Engineer-in Charge				
a)	3 Module	Each	8		
b)	6 Module	Each	3		
c)	12 Module	Each	1		
4	Supplying and fixing following modular switch / socket on the existing modular plate & switch box including connections but excluding modular plate etc as required . **Make:-** Crabtree Thames platinum range/Wipro Nova/Legrand Myrius range/MK (Wraparound Plus)/Equivalent approved by Engineer-in Charge				
a)	5 /6 Amps Switch	Each	6		
b)	15 /16 Amps Switch	Each	15		
c)	3 pin 5 /6 Amps Socket Outlet	Each	6		
d)	6 pin 15 / 16 Amps Socket Outlet	Each	15		

_____
Signature of contractor

5	Supplying & Fixing suitable size GI box with modular plate and cover in front on surface or in recess, including providing and fixing **25 Amps** modular socket outlet and **25 Amps** modular SP MCB, "C" curve including connections, painting etc.as required. **Make:-**Crabtree Thames platinum range/Wipro Nova/Legrand Myrius range/MK (Wraparound Plus)/Equivalent approved by Engineer-in Charge	Each	1		
6	Laying and fixing of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 kV grade of following size on **wall surface** as required incl. S+F of 1 X 10 SWG GI wire for E.C.C making holes and manding good the damages to original finish incl painting.(Cable Dept supply)				
a)	Upto 35 sq mm (clamped with 1 mm thick saddle)	Mtr.	35		
7	Supplying and making E**nd Termination** with brass compression gland and lugs for following size of PVC insulated and PVC sheathed/XLPE aluminum conductor cable of 1.1 kV grade as required. **Make:-**ARUN/Dowells/Equivalent approved by Engineer-in Charge				
a)	4 X 10 sq mm	Each	2		
8	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 40 mm dia. GI (medium gauge) watering pipe of 2.7 metre long etc with charcoal / coke and salt as required. **Make (Pipe):-**TATA (Medium) /Bansal (Medium) /Jindal (Medium)/Equivalent approved by Engineer-in Charge. The copper strip should be fixed on the copper plate by through Brazing only.	Each	1		
9	Providing and fixing **25 mm X 5 mm** copper strip on surface or in recess for connections etc. as required.All Joints should be done by Brazing only after 4" overlapping the strips or as decided by the Engineer.	Mtr.	40		
10	Providing and fixing **Earth Bus** of **50 mm X 5 mm** copper strip on surface on two no heavy duty insulators for connection etc. as required.	Mtr.	0.5		
11	Providing and fixing **4.00 mm** dia copper wire on surface or in recess for loop earthing along with existing surface/ recessed conduit/ submain wiring/ cable as required for copper plate earthing.	Mtr.	5		
12	Supply and Fixing medium gauge Gi pipe (ISI-Medium) protection for cable entry including bending the pipe to the required shape complete as required with laying of wire/cable through pipe. **Make:-**Medium size TATA/Bansal/Jindal/Equivalent approved by Engineer-in Charge				
a)	25 mm	Mtr.	1		
b)	40 mm	Mtr.	1		

_____
Signature of contractor

13	Supplying and fixing **TPN** sheet steel Enclosure on surface/recess along with **16/25/32 Amps**,415 V "C" curve TPN MCB complete with connection, testing and commissioning etc.as required. **Make:-**Legrand/Hager/L&T/Siemens/Schneider/Equivalent approved by Engineer-in Charge	Each	1		
14	Supplying and Fixing DP/4P Sheet Steel Enclosure on surface/recess complete with connection, testing and commissioning etc.as required with out MCB **Make:-** Legrand/Hager/L&T/Siemens/Schneider/Equivalent approved by Engineer-in Charge				
a)	**Four Pole** Enclosure for MCB	Each	2		
15	Fixing only 240V SPN/415V TPN Sheet Steel Main Switch or DP/TP/FP sheet steel enclosure or SP/TP Industrial Plug,Socket directly on surface / recessed /on flat iron legs on wall along with required DP/TP/FP MCB including necessary connection, testing as required. (Enclosure/Main switch / Industrial Socket : Department supply).	Each	1		
16	Supplying and fixing following way, **Single Pole and Neutral**, IP- 43, 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) **Make:-**Legrand/Hager/L&T/Equivalent approved by Engineer-in Charge				
a)	**6 Way**,Double door	Each	1		
17	Supplying and fixing of following ways surface/ recess mounting, **Vertical type**,IP-43, 415 V, TPN MCB distribution board of sheet steel, dust protected, duly powder painted, inclusive of **200 Amps**, tinned copper bus bar, common neutral link, earth bar, din bar for mounting MCBs (but without MCBs and incomer) as required. (Note : Vertical type MCB TP DB is normally used where 3 phase outlets are required.) **Make:-**Legrand/L&T/Hager/Equivalent approved by Engineer-in Charge				
a)	**4 Way** (4 + 12), Double door	Each	1		
18	Fixing of followings directly on surface / recessed /on flat iron legs on wall including necessary connection as required. (DBs/ switch fuse unit : Department supply).				
a)	**SPN** MCB DB (4 to 16 way)	Each	1		
b)	**TPN** MCB DB (4 to 12 way)	Each	1		

_____
Signature of contractor

19	Supplying and fixing **5 Amps to 32 Amps** 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. **Make:-** Legrand/Hager/L&T/Siemens/Schneider/Equivalent approved by Engineer-in Charge				
a)	**Single Pole**	Each	15		
b)	**Double Pole**	Each	1		
c)	**Triple Pole**	Each	1		
d)	**Triple Pole and Neutral**	Each	1		
20	Supplying and fixing **40 Amps to 63Amps** rating, 240/415 V,10 kA,"C" curve, Miniature Circuit breaker suitable for inductive load of following poles in the existing MCB DB or in enclosure complete with connections, testing and commissioning etc. as required. **Make:-**Legrand/Hager/L&T/Siemens/Schneider/Equivalent approved by Engineer-in Charge				
a)	**Triple Pole**	Each	1		
b)	**Four Pole**	Each	2		
		Total			

Total amount in words inclusive GST (Please mention applicable GST %):

1) All materials to be used after prior approval of Engineer in charge.
2) All eletrical work includes dismantling of old items in respective area and depositing them to the store with proper documentation
3) Copper Socketing above 4 sq.mm size are required for all end terminations with copper wire.These are to be strictly followed.
4) No twisting joints are allowed in any cases.Suitable connectors/Ceiling roses are to be used in switch/ Power Boards and ceiling rose
5) Laying of conduits on false ceiling are not allowed,the conduits are to be laid on wall/ceiling for connection to the points on false ceiling
6) Suitable glanding of the cables are to be done for cable end terminals brass.
7) G.I anti rust screws are to be used during fixing of pipes,cables conduits light fittings etc. on wall.
8) Valid challans and test/Certificates of all the materials supplied by the contracter are to be submitted before execution of work.

Signature of contractor

_____
Signature of contractor

Make list format

Name of the Work: Electrical Renovation Work in CWISS, Transport & Automobile Section and Materials Science Centre etc under Institute Academic area at IIT Kharagpur.

Sl. No.	Description of items	Approved makes proposed by the contractor	Makes approved by the Department
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			

_____ _____ _____

Signature of E (EW) Signature of Sr.E.E.(EW) Signature of S.E (E&M)

_____

Signature of contractor

Special Condition for Electrical work

1. The work shall be carried out as per national code or C. P. W. D specifications for works with correction slips issued up-to date unless otherwise specified in the schedule of quantities for the works.
2 The following Indian Standard Specifications and Codes of Practice will apply to the equipment and the work covered by the scope of this contract. In addition the relevant clauses of the Indian Electricity Act 1910 and Indian Electricity Rules 1956 as amended upto date shall also apply. Wherever appropriate Indian Standards are not available, relevant British and/or IEC Standards shall be applicable.

BIS certified equipment shall be used as a part of the Contract in line with Government regulations. Necessary test certificates in support of the certification shall be submitted prior to supply of the equipment.

It is to be noted that updated and current Standards shall be applicable irrespective of those listed below.

Low voltage Switchgear and Controlgear specifications	IS 13947 : 1993
Part I – General	
Part 2 – Circuit Breakers	
Part 3 – Switch Fuse Units	
Part 4 – Contactors and Motor Starters	
Part 5 – Control Circuit Devices	
Electrical Relays for power system protection	IS 3231 : 1986
Low voltage Switchgear and Control gear assemblies	IS 8623 : 1993
Marking of Switchgear busbars	IS 11353 : 1985
Degree of Protection of Enclosures for low	
voltage switchgear	IS 2147 : 1962
Code of Practice for selection, installation and	
maintenance of Switchgear	IS 10118 : 1982

4. No under-ground work or above the false ceiling shall be covered until the same has got approved by the Engineer-in-charge. The contractor will supply the drawings of specific works for approval, if required

5. All the old wiring has to be dismantled with proper care. The reusable old materials if any are to be handed over to departmental store with proper documentation and the other non reusable (nil reselling value) will be disposed by the contractor. The contractor shall clear the site thoroughly of all scaffolding materials & rubbish etc. left out of his work & dress the site around the building to the satisfactions & his decision in writing shall be final & binding on all concerned

6. Special care to be taken to avoid any theft of electrical fittings and fixtures while executing the work.

7. The location of Panel / DB / Switch board / Light point / Fan point will be as per existing location or as per the instruction of Engineer-in-charge.

8. All the wiring will be done with feruling and cable / Wire termination by required size or lugs of required materials and It should be noted that license wire man shall only be allowed for the wiring work.

Electrical safety at work site

The contractor will identify one of the supervisors for taking care of implementation of Safety systems.

The Contractor should follow the following General Guidelines governing the safety rules as laid down under:

_____

Signature of contractor

Usage of eye protection equipment shall be ensured when workmen are engaged for grinding, chipping, welding and gas-cutting. For other jobs as and when site safety co-coordinator insists eye protection has to be provided.

1. All safety appliances like Safety shoes, Safety gloves, Safety helmet, Safety belt, Safety goggles etc. shall be arranged before starting the job.

2. All excavated pits shall be barricaded & barricading to be maintained till the backfilling is done. Safe approach to be ensured into every excavation.

3. All the dangerous moving parts of the portable / fixed machinery being used shall be adequately guarded.

4. Ladders being used at site shall be adequately secured at bottom and top. Ladders shall not be used as work platforms.

5. Material shall not be thrown from the height. If required, the area shall be barricaded and one person shall be posted outside the barricading for preventing the tre-passers from entering the area.

6. Other than electricians no one is allowed to carry out electrical connections, repairs on electrical equipment or other jobs related thereto.
7. All electrical connections shall be made using 3 or 5 core cables, having a earth wire.

8. Inserting of bare wires for tapping the power from electrical sockets is completely prohibited.

9. A tools and tackles inspection register must be maintained and updated regularly.

10. Debris, scrap and other materials to be cleared from time to time from the workplace and at the time of closing of work every day.

11. All the unsafe conditions, unsafe acts identified by contractors, reported by site supervisors and / or safety personnel to be corrected on priority basis.

12. No children shall be allowed to enter the workplace.

13. All the lifting tools and tackles shall be stored properly when not in use.

14. Clamps shall be used on Return cables to ensure proper earthling for welding works.

15. All the pressure gauges used in gas cutting apparatus shall be in good working condition.

16. Proper eye washing facilities shall be made in areas where chemicals are handled.

17. Connectors and hose clamps are used for making welding hose connections.

18. All underground cables for supplying construction power shall be routed using conduit pipes.
19. Spill trays shall be used to contain the oil spills while transferring / storing them.
20. Tapping of power by cutting electric cables in between must be avoided. Proper junction boxes must be used.
21. Non-compliance to above shall invite a penalty recovery as per 3.22.8.

_____

Signature of contractor