

अनुसूचियां SCHEDULES
[FOR MINOR (ELECTRICAL) COMPONENT]

अनुसूची 'क' SCHEDULE 'A'
मात्राओं की अनुसूची (संलग्न)

Schedule of quantities (as per PWD-3)

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अनुसूची 'घ' SCHEDULE 'D'

कार्य के लिए विशेष अपेक्षाएं/दस्तावेज, यदि कोई हों, की अतिरिक्त अनुसूची
Extra schedule for specific requirements/documents
for the work, if any.

As specified in this NIT

अनुसूची (ड) SCHEDULE 'E'

ढेके की सामान्य शर्तों का संदर्भ

Reference to General Conditions of Contract

कार्य का नाम Name of work

As per Part-A

कार्य की अनुमानित लागत Estimated cost of work

**Renovation, Upgradation of Electrical works
in Block F (4 Nos, Campus Wall Side)
Type - III Quarters at Narcotics Residential
Quarter, Neemuch (M.P.)**

Civil : ₹ 38,77,802/-

Electrical : ₹ 14,14,946 /-

Composite Cost : ₹ 52,92,748/-

(i) धरोहर राशि Earnest money

Rs. 1,05,855/-

(ii) निष्पादन गारंटी Performance guarantee :

(a) 5% of tendered value or Estimated Cost Put to Tender (ECPT) (whichever is higher).
(b) Where the tendered amount is less than eighty percent (80%) of the Estimated Cost Put to Tender (ECPT), the Performance Guarantee, in addition to the requirement under (a) above, shall be increased by an amount equal to the difference between eighty percent (80%) of the ECPT and the tendered amount.
As per OM No. DG/CON/Construction 2023 /20 dated 27/02/2026.

(iii) प्रतिभूति निक्षेप : Security Deposit:

2.5% of tendered value

अनुसूची 'च' SCHEDULE 'F'

सामान्य नियम एवं दिशा निर्देश:

General Rules & Directions:

निविदा आमंत्रण करने वाला प्राधिकारी

Officer inviting tender -

Executive Engineer-Indore-I, CPWD, Indore

कार्य की मर्दों की मात्रा के लिए अधिकतम प्रतिशत जिससे अधिक
निष्पादित मर्दों के लिए दरों का निर्धारण खण्ड 12.2 (c) के
अनुसार होगा

Maximum percentage for quantity of items of
work to be executed beyond which rates are to
be determined in accordance with Clauses
12.2 (c).

See below

Definitions:

2(vi) भारसाधक इंजीनियर

Engineer-in-Charge

For Electrical Component:

**Executive Engineer-Elect, CPWD, Indore or
successor thereof.**

2(viii) स्वीकार कर्ता प्राधिकारी
Accepting Authority

Same as Part-A

2(x) अतिरिक्त और लाभों को पूरा करने के लिए श्रम एवं सामग्रियों की लागत पर प्रतिशतता
Percentage on cost of materials and labour to cover all overheads and profits.

15% (Fifteen percent)

2(x)(a) दरों की मानक अनुसूची
Standard Schedule of Rates

For Elect:- Delhi Schedule of Rate 2025 (E&M), with correction slips upto the previous day of submission of bid & Market Rate for non DSR items.

2(xi) विभाग
Department

Central Public Works Department

9(ii) मानक के.लो.नि.वि. ठेका फार्म
Standard CPWD Contract Form

CPWD Form 7 and GCC 2023 for construction work amended correction slip issued up to date of receipt of tender.

खण्ड Clause 1

(i) स्वीकृति पत्र जारी होने की तारीख से निष्पादन गारंटी के प्रस्तुतीकरण के लिए अनुमत समय
Time allowed for submission of performance guarantee from the date of issue of letter of acceptance

Same as Part A

(ii) (उपर्युक्त i) में दी गई अवधि के पश्चात् अधिकतम अनुमेय एक्सटेंशन
Maximum allowable extension with late fee @ 0.10% per day of performance guarantee amount beyond the period as provided in (i) above

Same as Part A

खण्ड Clause 2

(iii) खण्ड 2 के तहत प्रतिकर निश्चित करने वाला प्राधिकारी
Authority for fixing compensation under clause 2

Same as Part A

खण्ड Clause 5

कार्य आरंभ की तारीख की गणना के लिए स्वीकृति पत्र के जारी होने की तारीख से दिनों की संख्या
No. of days from the date of issue of letter of acceptance for reckoning date of start

Same as Part A

लक्ष्य (मील-पत्थर) सारणी

Table of milestone(s)
कार्य निष्पादित करने के लिए अनुमत समय
Time allowed for execution of work authority to decide
(i) Extension of Time
(ii) Rescheduling of mile stones
(iii) Shifting of date of start in case of delay in handing over of site

Same as Part A

Same as Part A

Same as Part A

खण्ड Clause 5.2

Nature of Hindrance Register
(either Physical or Electronic)

Same as Part A

खण्ड Clause 6

खंड लागू—(6) Clause applicable

Same as Part A

खण्ड Clause 7

अंतरिम भुगतान के लिए पात्र होने के लिए अंतिम ऐसे भुगतान के बाद कुल भुगतान एकत्रित सामग्रियों के अग्रिमों के समायोजन सहित किया जाने वाला कुल कार्य
Gross work to be done together with net payment/adjustment of advances for material collected, if any since the last such payment for being eligible to interim payment

Rs. 4 Lakhs for Electrical work**खण्ड Clause 7A**

Same as Part A

खण्ड Clause 8

Competent Authorities to inspect and issue part / final completion certificate

Same as Part A

खण्ड Clause 8A

Same as Part A

Clause 10A

कार्यस्थल प्रयोगशाला में ठेकेदार द्वारा उपलब्ध कराये जाने परीक्षण उपकरण की सूची
List of testing equipment to be provided by the contractor at site lab

Same as Part A

खण्ड Clause 10B(ii)

क्या खण्ड 10 ख, पद्ध लागू होगा
Whether clause 10B (ii) shall be applicable

Same as Part A

खण्ड Clause 10C

Component of labour expressed as Percent of value of work

Not Applicable

Clause 10 CC

Applicable, same as part A

खण्ड Clause 11

कार्य निष्पादन के लिए अनुपालन
Specifications to be followed for execution of work

For Electrical :

CPWD General Specification for Electrical Works Part I Internal – 2023,
CPWD General Specification for Electrical Works Part II External – 2023,
All amended upto date of receipt of tender.

11(i) Building Information Model (BIM) is applicable & BIM Professional to be deployed by contractor

Same as Part A. Applicable

खण्ड Clause 12

Deviation limit beyond which clauses 12.2 (c) shall apply for building work.

Same as Part A.

(i) Deviation limit beyond which clauses 12.2 (c) shall apply for foundation work (except items mentioned in earth work subhead of DSR and related items)

Same as Part A.

(ii) Deviation limit for items mentioned in earth work subhead of DSR and related items

Same as Part A

खण्ड Clause 16

घटी हुई दरे निर्धारित करने की लिए सक्षम प्राधिकारी
Competent Authority for deciding reduced rates

Same as Part A

खण्ड Clause 18

कार्यस्थल पर ठेकेदार द्वारा लगाये जाने वाली अनिवार्य मशीनरी औजार एवं सयंत्रों की सूची :-
List of mandatory machines, tools and plants to be deployed by the contractor at site.

Same as Part A

खण्ड Clause 19 C Amount & Authority to decide penalty for each

Amount same as Part A, Authority EE (E), Indore or his successor thereof.

खण्ड Clause 19 D Amount & Authority to decide penalty for each

Amount same as Part A, Authority EE (E), Indore or his successor thereof.

खण्ड Clause 19 G Amount & Authority to decide penalty for each

Amount same as Part A, Authority EE (E), Indore or his successor thereof.

खण्ड Clause 19 K Amount & Authority to decide penalty for each

Amount same as Part A, Authority EE (E), Indore or his successor thereof.

खण्ड Clause 25

Same as Part A

खण्ड Clause 32

Requirement of Technical Representative(s) and recovery Rate

applicable for Electrical works

अनुमत्य विचलन से अधिक की मात्राओं के लिए वसूली दरें

RECOVERY RATES FOR QUANTITIES BEYOND PERMISSIBLE VARIATION

क्रम सं.	मद विवरण	अंको और शब्दों में वह दर जिस पर ठेकेदार से वसूली की जाएगी
Sl. No.	Description of item	Rates in figures and words at which recovery shall be made from the Contractor
		अनुमत्य विचलन से अधिक आधिक्य Excess beyond Permissible variation
		अनुमत्य विचलन से अधिक उपयोग घटाया Less use beyond the permissible variation

1.	सीमेन्ट Cement	N.A.
2.	ईस्पात Steel Reinforcement	N.A.

Executive Engineer (E)
ICED, CPWD, Indore

ELIGIBILITY CRITERIA FOR SPECIALISED E & M WORKS

1. The contractor shall have to associate other agency(s) for execution of each of the work(s), which fulfils the eligibility criteria as defined after taking prior approval. The contractor and the associated specialized agencies shall give required affidavit to confirm their association. Tender accepting authority may approve change of sub agency in case it is required during the currency of contract. However the contractor shall also be eligible to carry out himself any or all of the works without associating any specialized agency provided -

- a) He fulfills the prescribed eligibility criteria respectively for these work(s).

OR

- b) He directly procures the equipment of approved make from manufacturer and gets it installed from authorized agency / service provider of the manufacturer or get it installed by Specialized agency as per criteria mentioned.

Sl. No.	Specialized work(s)/item of work(s)	Criteria of associated agencies
i)	EI Works	a) Electrical contractor license OR undertaking that they will either obtain valid electrical license at the time of execution of electrical work OR associate CPWD registered contractor having valid electrical license of appropriate class.

To become eligible for EI/specialized works, main contractor/Specialized agency shall have to furnish an affidavit as under -

“I/We undertake and confirm that eligible similar works(s) has/have not been got executed through another contractor on back-to-back basis. Further that, if such a violation comes to the notice of Department, then I/we shall be debarred in CPWD in future forever. Also, if such a violation comes to the notice of Department, the Engineer-in-Charge shall be free to forfeit the entire amount of Earnest Money Deposit/Performance Guarantee.”

SPECIAL CONDITIONS FOR ELECTRICAL WORKS FOR COMPOSITE WORKS

1. For electrical works, the bidder should have valid electrical contractor license from competent authority in the name of the contractor. However, the contractors is allowed to participate in tender with an undertaking that they will either obtain valid electrical contractor license at the time of execution of electrical work or associate CPWD registered contractors having valid electrical contractor license of eligible class. Similarly for specialized electrical works also, the main agency can execute the concerned specialized electrical works provided they have work experience as per requirement given in NIT as below. Otherwise they have to propose minimum three names of associated agencies with whom they want to get associated for execution of specialized electrical works.
2. Or else If the main agency does not have electrical contractor license then the main agency shall have to submit credential of the minimum three associated agencies for verification and approval of the department in Performa at Annexure-IV. Consent letter of such selected agencies for association shall also be enclosed in the prescribed format (Annexure-V). Main agency shall propose minimum three names of eligible associates for the specific electrical component for individual E&M services within **60 (Sixty) days** from the date of start of work.

3. Specialized Items :

Association of Other Agency(s) for execution of specialized E&M works by the Composite Category contractor:

3. After obtaining concurrence of department for such association, the main agency has to enter into agreement/MOU with the contractor associated by him for execution of minor component. Copy of such agreement/MOU shall be submitted to EE (E) in charge of electrical component for approval by NIT approving authority as well as to EE in charge of major component. **(As per Annexure - VI)**
4. All technical discussions shall be attended by the associate agency and the main agency. Commercial / Technical submissions for the individual electrical works shall be signed and submitted by the associate agency along with the main agency.
5. Price-bid for electrical components shall be submitted by the main agency.
6. Award of work shall be made by the Engineer-in-charge of the major component to the main agency for complete work.
7. The main contractor shall be entirely responsible and answerable for all the works done by his associated electrical contractors regarding their quality, adherence to the laid down specification, terms and conditions, warranty/guarantee etc and he shall be liable to bear any compensation that may be levied by the department under any of the clauses of the agreement.
8. The manufacturer's guarantee/warrantee for all the electrical accessories shall be for minimum period as specified for the individual E&M services in the NIT from the date of taking over of the installation by the department. Necessary documents of handing / taking over of the

installation will be duly signed by the three parties namely EE (E) the main contractor and the associate contractors. The main contractor will ensure that the maintenance during the guarantee period shall also be carried out by the associate contractors. five year as specified in the NIT guarantee is to be provided free of cost as per item in the schedule of quantity and specification thereof.

9. The main contractor shall also give necessary general power of attorney under the contract to the associated electrical contractors to enable him to receive instructions from electrical engineers of the department at site, sign the site order book, bills MBs for acceptance of measurement and receive stipulated materials etc.
10. The main contractor shall be responsible for coordinating the activities of all the works and will ensure progress of all works as per the laid down program. The main contractor shall also arrange for proper storage of the electrical accessories at site and will be responsible for their watch and ward.
11. Associate electrical agencies shall submit the fortnightly labour report. Material for use at work shall be procured by the electrical agencies. For this purpose invoice / delivery challan shall be submitted to the department by the associate agencies.
12. Sample of materials like pipe, conduits wires, of each size etc. may be got tested in the laboratory approved by Engineer -in charge, as and when desired by Engineer-in-charge.
13. All the materials intended to be used in the work shall be got approved by Engineer-In-Charge before use at site.
14. Fish wire shall be provided in each conduit where wiring is not carried out.
15. Extra item ,deviation etc. shall be carried out only after written approval of competent authority.
16. For power wiring/computer point wiring GI box of 6/8 module shall be in horizontal pattern only.
17. (a) **All the associate electrical contractors for minor work has to submit their shop drawings/ detailed drawings for the individual E&M services for approval by Engineer-in-charge. Main agency has to submit coordinated drawing of all the services of the work including Civil components as well as E&M components for approval.**
 (b) **All the associate electrical contractors for individual minor components should submit technical data sheets of the equipments and the materials duly conforming to technical requirements as per NIT for approval of Engineer-in-charge well in advance.**

For Composite Tenders

- 18.1.1 The Executive Engineer in charge of the major work will call tenders for the composite work. The cost of tender document and Earnest money will be fixed with respect to the combined estimated cost put to tender for the composite tender.
- 18.1.2 The tender document will include following three components:
 - Part-A : CPWD - 6, CPWD-7/8 including schedule A to F for the major component of the work, Standard General conditions of Contract for CPWD 2023 amended / modified upto last date of receipt of tender or latest edition as applicable with all amendments / modifications up to last date of receipt of tender.
 - Part-B : General / specific conditions, specifications and schedule of quantities applicable to major component of the work.
 - Part-C : General / specific conditions, specifications and schedule of quantities applicable **for minor component** of the work (SE/EE in charge of Work shall also be competent authority under clause 2 and clause 5 as mentioned in schedule A to F for major components) General /

Specific Conditions, specifications and schedule of quantities applicable to minor component(s) of the work.

- 18.1.3 The tenderer must associate with himself, agencies of the appropriate class or experience eligible to tender for each of the minor component individually.
- 18.1.4 The eligible tenderers shall quote rates for all items of major component as well as for all items of minor components of work.
- 18.1.5 After acceptance of the tender by competent authority, the EE in charge of the work shall issue letter of award on behalf of the President of India.
- 18.1.6 Entire work under the scope of composite tender including major and all minor components shall be executed under one agreement.
- 18.1.7 The main contractor has to associate agency(s) for minor component(s) conforming to eligibility criteria as defined in NIT and has to submit detail of such agency(s) to Engineer-in-charge within one month of award of work. Name of the agency(s) to be associated shall be approved by NIT approving authority of minor component(s) .
- 18.1.8 In case the main contractor intends to change any of the above agency/agencies during the operation of the contract, he shall obtain prior approval of competent authority, who had earlier approved the same. The new agency/agencies shall also have to satisfy the laid down eligibility criteria. In case Engineer-in-charge is not satisfied with the performance of any agency, he can direct the contractor to change the agency executing such items of work and this shall be binding on the contractor.
- 18.1.9 The main contractor has to enter into agreement/MOU with contractor(s) associated by him for execution of minor component(s). Copy of such agreement shall be submitted to EE. In case of change of associate contractor, the main contractor has to enter into agreement with the new contractor associated by him, only after approval of competent authority..
- 18.1.10 It will be obligatory on the part of the firm/ agency to sign the tender documents for all components before the first payment is released.
- 19.0 The agency has to submit all necessary bills, test certificates, transport details, etc or any other certificate or document as demanded by Engineer-in-charge for verifying material quality and genuinity.
- 20.0 The agency shall take prior approval of Engineer-in-charge before bringing any material at site.
- 21.0 The bidder can propose any make other than the makes mentioned in the NIT as per Public Procurement Preference to Make in India and all the Circulars in the subject matter till date. The bidder while proposing additional make will have to prove himself as Class I local supplier in respect of the complete tender and not just the particular item for which the bidder is proposing additional make. The bidder must also give the reasons why the additional make addition is necessary for him to be a Class I local supplier under Make in India Policy.

Executive Engineer (E)
ICED, CPWD, Indore

Annexure IV

**PROPOSAL FOR ASSOCIATING ELECTRICAL AGENCIES for ELECTRICAL
INSTALLATION**

We hereby propose the following electrical agencies as per details mentioned against each. Their consent letters are also attached as per Annexure II

S No .	Name of electrical contractor/ Firm	Category and class of registration in CPWD/ Experience Certificate	Registration No.	Electrical Contractor License	Validity of registration	Consent letter attached (yes/No)
1.						
2.						
3.						

Note:- A copy of registration order, electrical contractor license, experience certificate, agreement, final bill etc as applicable shall be attached for each agency.

Contractor's signature

Annexure V

CONSENT LETTER

I/We hereby give my/ our consent to work as electrical/specialized contractor for work till the completion ofwork and I/we will be responsible for necessary action to hand over the work and for rectification of defects and repair during the maintenance period. I/we will execute the work as per CPWD specification and addition conditions of the works. For that, I am hereby submitting my experience certificate, copy of final bills, electrical contractor license etc duly self attested for your kind consideration.

I/We assure you that all the material will be purchased by me/company/firm. All the bills, test certificates etc will be deposited by me along with delivery of materials. I/We will also be responsible to get any material checked and tested in the laboratory as per the direction of Engineer in charge. At the same time all the expenses on account of sample, test charges etc will also be paid by me and the same will not be reimbursed by the department.

I/we will also engage suitable Engineer for the work as per condition of work. I further certify that the above particulars pertaining to me are correct.

Signature of Electrical contractor

Annexure VI

Memorandum of Understanding
Rs. 100/- Non-judicial stamp

This Memorandum of Understanding (MOU) is made on the _____ at _____

Between

M/s _____ (Main Contractor) having his registered office at _____ which expression shall unless repugnant to the subject or context include its administrators, successors and assigns.

And

M/s _____ (Associate contractor) registered in CPWD as class : _____ Electrical contractor and _____ having his registered office at _____ which expression shall unless repugnant to the subject or context include its administrators, successors and assign.

Whereas, the Central Public Work Department, have awarded for the following work to M/s _____ (Main Contractor).

Name of work :

NIT No. :

Whereas, This Memorandum of Understanding has been entered into to execute the electrical work in above work by the Main Contractor and Associate Contractor.

Whereas, both the parties have gone through and understood the various conditions and clauses of the tender and willingly agree to abide by them.

This MOU shall be valid till the duration of completion of above work and shall be extended if so required by the CPWD.

Now, therefore it is further agreed between the parties here to as follows :-

- 1 The associated electrical contractor shall completely execute, perform and do all the works mentioned and described in the main agreement for its electrical components according to the specifications, terms and conditions etc. of the main agreement.
- 2 The associated electrical contractor shall execute and complete the works in all respect up to full satisfaction of the CPWD officers and attend to them during their inspection at site, meetings etc., whenever required by the CPWD officers.
- 3 The cost of electrical works executed by the associated electrical contractor will include the cost of all the materials, accessories, equipments, tools & plants, laborers technical persons. Required, testing charges etc. in all respect.
- 4 The associated electrical contractor is responsible for getting recorded measurements and preparation, submissions & pursuance of payment of the bills of the work done for electrical portion of the main agreement.
- 5 **The rate will be as per the schedule enclosed.**
- 6 The Quantity will be as per actual measurement as received from CPWD to main contractor and the rate will be as per the mutually agreed.
- 7 The payment to associate contractor will be released after the payment to main contractor is made by the CPWD.

- 8 The technical staff required for the associate discipline shall be of associate contractor.
 - 9 The guarantee of the installation after the completion of the work shall be responsibility of the associate electrical contractor as required by the CPWD.
 - 10 Either party shall not repudiate the contract in mid way without the consent of each other. Otherwise it will be treated as breach of agreement for any reason whatsoever.
 - 11 The main agency shall be solely responsible for deferment & rescheduling of each milestone fixed as per contract documents and in such eventuality, the consequences arising out of the same rests on main agency.
 - 12 The main contractor only shall be responsible for getting extension of delay regularized and liability what so ever flowing out shall lies with them. There shall be no direct or indirect impact on associate contractor.
 - 13 TDS shall be deducted by the main contractor as per Income Tax law from associated agency. In case liability of tax other than Income Tax (Such as VAT, GST) is levied on associated contractor then the main agency will reimburse it in full to associated agency.
 - 14 The associated contractor shall be bound to execute work upto a deviation limit of 100% in quantities of items of work at the agreement rate. Beyond deviation limit the rates will be decided by main & Associated contractor on mutually agreed basis.
 - 15 For the items such as extra items and new items other than the items of main agreement, if any incorporated in the work, then the main contractor shall pay the full amount so approved to the associate contractor.
 - 16 The validity of rates shall be for two years after finalization & acceptance of MOU by the competent authority.
 - 17 In case main contractor delays the payment to associated contractor after the payment is released by department to the main contractor then on receipt of delay in payment from associate contractor the CPWD shall directly make the payment to associated contractor.
 - 18 The main contractor shall at their cost provide necessary requisite arrangement for storage of material.
 - 19 Sand & cement used in the electrical work shall be provide by main contractor.
 - 20 Security Deposit as deducted by the CPWD will be reimbursed by main contractor to associate contractor. However associated electrical contractor will deposit 2 ½ % of Agreement amount of Rs. _____ in shape of FDR towards S/D to be retained by main contractor which will refunded to electrical contractor after completion of electrical work.
 - 21 The Income tax, Commercial tax and labour cess tax deducted by the CPWD from the bills of electrical work shall be reimbursed by the main contractor in favour of the associated electrical contractor accordingly.
 - 22 All the correspondence regarding execution of Structural System of Opted Technology work shall be done by the department with the main contractor. In case of non-compliance of the provisions of agreement of the work by the associated contractor, the main contractor shall be held responsible and action will be taken against him as per agreement provisions.
 - 23 In case of non-performance associated contractor will be debarred from participation or association in the CPWD tenders by the CPWD.
- In witness whereof we have put our hand seal on date _____.

Enclose :- Schedule of rates.

Signature

Signature

(Associate Contractor)

Address : _____

Witness I:

(Major Contractor)

Address : _____

Witness II:

ADDITION NIL, CORRECTION NIL

INSERTION NIL, CUTTING NIL

AE(E) (P)

ADDITIONAL CONDITIONS
(Electrical & Mechanical Installation)

1. For electrical works, the bidder should have **valid electrical license from competent authority in the name of the contractor. However, the contractors is allowed to participate in tender with an undertaking that they will either obtain valid electrical license at the time of execution of electrical work or associate contractors having valid electrical license of eligible class.**
2. In case the main contractor himself meets the required eligibility criteria as laid down by the department for any minor component(s) of work, he shall be allowed to execute this minor component(s) after due verification & approval of the Engineer-in-charge of this component.
3. The main contractor if required has to submit the following documents of at least three agencies for association of electrical contractor:
 - a) Copy of valid registration with CPWD as on the date of submission of proposal for associate to Engineer-in-charge of this work to establish the eligibility of proposed associate.
 - b) Copy of valid Electrical License with appropriate authority with an undertaking that it shall be get renewed time to time during currency of agreement.
 - c) Willingness letter from the proposed associate.
 - d) Undertaking from proposed associate that all the provisions of integrity Pact applicable on main contractor shall also be applicable on him.

After approval of the agency for association to the Engineer-in-charge of this component, the main contractor has to enter in agreement with the approved associate contractor for execution of minor component (internal & external electrical installation) as per stipulated technical specification and term & condition of main contract and copy of such agreement shall be submitted to the Engineer-in-charge of this component as well as the Engineer-in-charge of major component.

4. Running payment for minor components shall be made by the Engineer-in-charge of the discipline minor component directly to the main contractor. The main contractor shall make payment to associated contractor for minor component. In case there is delay of payment for more than seven days then on receipt of letter from associated contractor of such delay payment, payments shall be made directly to the associate agency by CPWD by recovering from main contractor.
5. The main contractor/associates are advised to visit the site of work / all concept/architectural drawings to have an idea of the scope / nature of work. Failure to do so shall not absolve their responsibility to do the work as specified in agreement.
6. In the event of the concerned E&M agency not performing satisfactorily or failure of associate/ sub-contractor to complete the E&M work, the main contractor on the written direction of the department, shall remove the Associate/sub-contractor deployed on the work and shall submit name of three new associates who fulfill the conditions mentioned in NIT to execute the leftover work without any loss of time or variation in cost to the department in this regard. After approval from department, such associates shall also enter into agreement / contract with the main contractor and shall meet all the guarantee for the equipments already supplied for which payment has been released by the Department in part or full.

7. If any equipment supplied for the work, during the currency of the earlier associate / sub-contractor and paid in part or full by the department, becomes redundant or not in a position to be installed and commissioned and put to beneficial use, the main contractor shall be liable for replacement of such equipment(s) at no cost to department. Prior approval of Engineer-in-charge is required for change in associated contractor.
8. The main contractor shall not indulge in procurement of items and getting the work done on labour contract with the associate electrical contractor. The whole E&M component shall be executed by the eligible associate electrical contractor on a turnkey basis i.e. procurement of material, engaging labour, execution, testing & commissioning etc. The associate electrical contractor shall submit the completion certificate of E&M work executed by him along with necessary test reports, guarantee bond/certificate, completion plan etc.
9. The main contractor shall be responsible and liable for proper and complete execution of all components of work. Main contractor is also responsible to ensure coordination among various associates / sub contractor to complete the whole scope of work.
10. The associate or sub contractor shall attend the inspection of the work by the Engineer-in-Charge of E&M works or any other senior officers of Department or other Departments, as and when required.
11. All sundry fittings, assemblies, accessories, hardware items, foundation bolts, termination lugs for electrical connections as required, and all other sundry items which are useful and necessary for proper assembly and efficient working of the various components of the work shall be deemed to have been included in the tender, whether such items are specifically mentioned in the tender documents or not.
12. The several documents forming the contract are to be taken as mutually explanatory to one another, detailed drawings being followed in preference to small scale drawings and figured dimensions in preference to scale and additional/special conditions in preference to general conditions.
13. In the case of discrepancy between the schedule of quantities, the specification and/or the drawings, the following order of preference shall be observed:-
 - a) Description of schedule of quantities.
 - b) Particular specifications, if any.
 - c) Additional specifications, if any
 - d) Additional/special conditions, if any.
 - e) General conditions, if any.
 - f) Drawings.
 - g) Contract Clauses of General conditions of contract for CPWD 2023 (CONSTRUCTION).
 - h) CPWD specifications.
 - i) Indian standard specifications of BIS.
 - j) NBC 2016
 - k) Sound engineering practice as per directions of the Engineer-in-charge.
 - l) Manufacturers' specifications.

A reference made to any Indian Standard Specifications in these documents, shall imply reference to the latest version of that standard, including such revisions/amendments as issued by the Bureau of Indian Standards/any other authority upto last date of submission of tenders. **The contractor shall keep at his own cost all such publications of relevant Indian Standards applicable to the work at site.**

15. **Works to be done by the contractor:**

Unless and otherwise mentioned in the tender documents, the following works shall be done by the contractor, and therefore their cost shall be deemed to be included in their tendered cost:-

- (i) Foundations for equipments and components where required, including foundations bolts.

ADDITION NIL, CORRECTION NIL

INSERTION NIL, CUTTING NIL

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- (ii) Cutting and making good all damages caused during installation and restoring the same to their original finish.
- (iii) Sealing of all floor openings provided by him for pipes and cables, from fire safety point of view.
- (iv) Painting at site of all exposed metal surfaces of the installation other than pre-painted items like fittings, fans, switchgear/distribution gear items, cubical switchboard etc. Damages to finished surfaces of these items while handling and erection, shall however be rectified to the satisfaction of the Engineer-in-Charge.
- (v) Testing and commissioning of completed installation.

16. Storage and Custody of Materials:

The contractor has to make his own arrangement for the storage of the material at site & necessary watch and ward of the same till handing over of the complete work to the department. No extra payment will be made on this account.

17. Electric Power Supply and Water Supply:

Power and water supply shall be arranged by the contractor for the execution of the work, at their own cost.

18. Tools for handling and Erecting:

All tools and tackles required for handling of equipments and materials at site of work as well as for their assembly and erection and also necessary test instruments shall be the responsibility of the contractor.

19. Payment Terms:

Payment shall be made as per the relevant clauses of form PWD 7/8 forming part of the tender documents.

20. Co-ordination with other agencies:

The work will be carried out in close coordination with the building work and other agencies, so as the work of other agencies are not hindered. Conduits will be laid in the slab within the specified time and it will have to be ensured that the casting of slabs is not delayed for want of laying of conduits. The conduits will also be laid in walls before the Plaster work is undertaken so as to avoid breaking cutting of plaster while making chase for laying of conduits subsequently. The contractor will have to employ adequate labour for carrying out the work. No claim regarding the idle labour for any reason will be entertained by the Department.

The main contractor shall be responsible for coordinating the activities of all works and essential progress of works as per milestone and laid down programme.

21. Care of buildings:

Care shall be taken by the contractor to avoid damage to the building during execution of his part of the work. He shall be responsible for repairing all damages and restoring the same to their original finish at his cost. He shall also remove, at his costs, all unwanted and waste materials arising out of his work, from the site.

22. Structural Alterations to Buildings:

- a) No structural member in the building shall be damaged / altered, without prior approval from the competent authority through the Engineer-in-charge.
- b) Structural provisions like openings, cutouts, if any, provided by the department for the work, shall be used. If any modifications or fresh provisions are required, such contingent works shall be carried out by the contract at his cost after approval of the engineer-in-charge.

- c) All such openings in floors provided by the department shall be closed by the contractor after installing the cables/conduits/rising mains etc. as the case may be, by any suitable means as approved by the Engineer-in-charge without any extra payment.
- d) All chases required in connection with the electrical works shall be provided and filled by the contractor at his own cost to the original architectural finish of the buildings.

23. Addition to an installation:

Any addition, temporary or permanent, to the existing electrical installation shall not be made without a properly worked out scheme/design by a qualified Electrical Engineer to ensure that such addition does not lead to overloading, safety violation of the existing system.

24. Drawings:

The work shall be carried out in accordance with the drawings and the tender documents and also in accordance with modification thereto from time to time as approved by the Engineer-in-charge.

- (a) All wiring diagrams shall be deemed to be 'Drawings' within the meaning of the term as used in Clause 11 of the conditions of contract (PWD 7 or PWD 8).
 - (b) They shall indicate the main switch board, the distribution boards (with circuit numbers controlled by them), the runs of various mains and sub mains and the position of all points with their controls.
 - (c) All circuits shall be indicated and numbered in the wiring diagram and the points shall be given the same number as the circuit to which they are electrically connected.
 - (d) After award of the work, the firm will be required to submit the drawings for the proposed work including layout plan, conduit routes etc. Work will be carried out as per the approved drawings.
- 25.** The contractor shall take all safety precautions to avoid accidents by exhibiting caution boards, red flags, red lights and by providing necessary barriers and all other measures required from time to time. The contractor shall be responsible for all damages and accidents due to negligence on his part.
- 26.** The contractor shall give due notices to Municipality, Police and/or other authorities that may be required under the law/rules under force and obtain all requisite permissions/licenses for temporary obstructions/enclosures and pay all charges which may be leviable on account of his execution of the work under the agreement. Nothing extra shall be payable on this account.
- 27.** All tools, plant and machinery provided by the contractor shall, when brought at the site, be deemed to be exclusively intended for the construction and completion of this work and the contractor shall not remove the same or any part thereof (save for the purpose of moving it from one part of the site to another) without the consent of the Engineer-in-charge.
- 28.** All materials shall be got checked & approved by the Engineer-in-charge on receipt of the same at site before use in the work. The rejected material is to be removed from the site immediately.
- 29.** No foreign exchange shall be made available by the department for the purchase of equipments, plants, machinery, materials of any kind or any other items required to be carried out in execution of work.
- 30.** The contractor shall give the Engineer-in-charge in every fortnight, a progress report of the work done during the previous fortnight and the targets for the next fortnight. The progress of work will be reviewed periodically by the Engineer-in-Charge with the contractor and shortfalls, if any, sorted out. The contractor shall thereupon take such action as may be necessary to bring back his work to schedule without any additional cost to the department.
- 31.** It shall be responsibility of the main contractor to sort out any dispute involved with the associated contractor without any time and cost overrun to the department. The main contractor shall be solely responsible for settling the dispute/litigation arising out of his agreement/ MoU with the associate contractor. The contractor shall ensure that the work shall not suffer on this account.
- 32.** The contractor will have to ensure that the skilled labour i.e. wireman etc., engaged in the execution of the work must possess valid electrical license, otherwise he will not be permitted to execute the work.

33. The associate contractors executing the electrical works must possess the valid electrical contractor license otherwise they will not be permitted to execute the electrical works.
34. The contractor shall be responsible for removal of all defects in the work during the defect liability/guarantee/warranty period. The department shall carry out routine maintenance only. However, if any failure is noticed during this period which is attributable to poor quality of material and bad workmanship, the contractor will be required to rectify the same at his own cost, failure of which the department will be at liberty to get the defects rectified at the risk & cost of the contractor.
35. The contractor will also be required to carry out his own inspection/testing during the guarantee/warranty period and attend to any defect taking place during this period.
36. Material required for the work shall be brought at site at the appropriate time keeping in view the requirement of material depending on progress of the work.
37. In case the main contractor fails to make the payment to the contractor associated by him as per mutually agreed terms & conditions and associated contractor makes a written complain to Engineer-in-charge, he shall serve the notice to main contractor to show cause within 7 days that why recovery for non payment to associated contractor shall not be made from the next running/final bill. In case no cause is shown by the main contractor within the giving time or the cause shown is not to the satisfaction of Engineer-in-charge, the Engineer-in-charge of minor component will recover the due amount from the main contractor and pay to associate contractor. In case sufficient amount is not available, the same shall be recovered from any other amounts available with the department/Government. **Also Engineer-in-charge can make payment to the associate contractor directly in such situation.**
38. **If the main contractor fails to associate contractor for execution of this minor components within prescribed time or furnishes incomplete details or furnishes details of ineligible agencies even after the main contractor is given due opportunity, the entire scope of such component of works shall be withdrawn from the main contractor and the same shall be got executed by the Engineer-in-Charge at the risk and cost of the main contractor.**

39. **BYE-LAWS AND REGULATIONS**

The work shall be carried out to the satisfaction of the Owner's site representative and in accordance with the Specifications, Regulations of the Electric Supply Authority, Indian Electricity Rules and Regulations, latest Indian Standards and as per the requirements of the Chief Fire Officer.

40. **FEES AND PERMITS**

The Contractor shall pay any and all fees and obtain permits required for the installation of this work. On completion of the work, the contractor shall obtain and deliver to the Owner, certificate of final inspection and approval by the local fire authority (CFO/ Municipal, State/Central govt. whichever is applicable).

41. **SHOP DRAWINGS**

- I. All the shop drawings shall be prepared on computer through AutoCAD System based on Architectural Drawings, site measurements and Interior Designer's Drawings. Within eight weeks of the approval, the associate, contractor shall furnish, for the approval of the engineer-in-charge, two set of detailed shop drawings of all equipment and materials including layouts for all conduit layouts, distribution panels, and any other requirement to be fabricated or purchased by the contractor.
- II. These shop drawings shall contain all information required to complete the Project as per specifications and as required by the engineer-in-charge. These drawings shall contain details of

construction, size, arrangement, operating clearances, performance characteristics and capacity of all items of equipment, also the details of all related items of work by other contractors. Each shop drawing shall contain tabulation of all measurable items of equipment/ materials/ works and progressive cumulative totals from other related drawings to arrive at a variation-in-quantity statement at the completion of all shop drawings.

Each item of equipment/material proposed shall be a standard catalogue product of an established manufacturer strictly from the list of approved manufacturer attached in this minor components.

When the engineer-in-charge makes any amendments in the above drawings, the contractor shall supply two fresh sets of drawings with the amendments duly incorporated along with check print, for approval. The contractor shall submit further six sets of shop drawings to the engineer-in-charge. No material or equipment may be delivered or installed at the job site until the contractor has in his possession, the approved shop drawing for the particular material/equipment/ installation.

- III. Shop drawings shall be submitted for approval sufficiently in advance of planned delivery and installation of any material to allow engineer-in-charge ample time for scrutiny. No claims for extension of time shall be entertained because of any delay in the work due to his failure to produce shop drawings at the right time, in accordance with the approved programme.
- IV. Manufacturers' drawings, catalogues, pamphlets and other documents submitted for approval shall be in four sets. Each item in each set shall be properly labelled, indicating the specific services for which material or equipment is to be used, giving reference to the governing section and clause number and clearly identifying in ink the items and the operating characteristics. Data of general nature shall not be accepted.
- V. Samples of all materials like conduits, accessories, switches, wires, control cables etc shall be submitted to the engineer-in-charge prior to procurement. These shall be submitted in two sets for approval and retention by engineer-in-charge and shall be retained for reference and verification till the completion of the Project.
- VI. Approval of shop drawings shall not be considered as a guarantee of measurements or of building dimensions. Where drawings are approved, said approval does not mean that the drawings supersede the contract requirements, nor does it in any way relieve the contractor of the responsibility or requirement to furnish material and perform work as required by the contract.
- VII. Where the contractor proposes to use an item of equipment, other than that specified or detailed on the drawings, which requires any redesign of the structure, partitions, foundation, wiring or any other part of the mechanical, electrical or architectural layouts; all such re-design, and all new drawings and detailing required therefore, shall be prepared by the contractor at his own expense and gotten approved by the engineer-in-charge.
- VIII. The contractor shall prepare composite working drawings and sections at a suitable scale, not less than 1:50, clearly showing how his work is to be installed in relation to the work of other trades. If the Contractor installs his work before coordinating with other trades, or so as to cause any interference with work of other trades, he shall make all the necessary changes without extra cost to the engineer-in-charge.
- IX. Within four weeks of approval of all the relevant shop drawings, the contractor shall submit four copies of a comprehensive variation in quantity statement, and itemized price list of recommended (by manufacturers) imported and local spare parts and tools, covering all equipment and materials in this contract.

42. ACCESSIBILITY

The Contractor shall verify the sufficiency of the size of the shaft openings, clearances in wall cavities and suspended ceilings for proper installation of his conduits cables, cable trays, panels etc. His failure to

communicate insufficiency of any of the above shall constitute his acceptance of sufficiency of the same. The Contractor shall locate all equipment which must be serviced, operated or maintained in fully accessible positions. The exact location and size of all access panels, required for each concealed control damper, valve or other devices requiring attendance, shall be finalized and communicated in sufficient time, to be provided in the normal course of work. Failing this, the Contractor shall make all the necessary repairs and changes at his own expense. Access panel shall be standardized for each piece of equipment / device / accessory and shall be clearly nomenclature / marked.

43. MATERIALS AND EQUIPMENT

All materials and equipment shall conform to the relevant Indian Standards and shall be of the approved make and design. Makes shall be strictly in conformity with list of approved manufacturers attached in this minor components.

The Contractor shall be responsible for the safe custody of all materials and shall insure them against theft or damage in handling or storage etc. A list of items of materials and equipment, together with a sample of each shall be submitted to the Owner's site representative within 15 days of the award of the contract.

The quantity of material in the BOQ is indicative. Contractor has to assess the actual requirement of material at site & take approval of Engineer In charge before placing the order, keeping in view the drawing and site requirement from the shortest route. No claim for payment for unused excess material shall be entertained.

44. COMPLETION CERTIFICATE

On completion of the electrical installation a certificate shall be furnished by the Contractor countersigned by the licensed supervisor, under whose direct supervision the installation was carried out. This certificate shall be in the prescribed form as required by the local, state/central govt./ municipal / fire authorities concerned.

45. COMPLETION DRAWINGS

Upon completion of the work and before issuance of certificate of virtual completion the contractor shall submit to the engineer-in-charge four set of layout drawings in progressive manner for individual systems drawn at approved scale indicating the complete wiring system as installed. Drawing shall be prepared on AUTO-CAD (latest version). Along with the hard copies, the contractor shall submit copies of all drawings on CD and one set of all drawings on RTF shall also be submitted. These drawings must provide:

- a. Single line distribution diagram including sub-main circuit wiring etc.
- b. Location of all DB's, switch board, panels etc.
- c. Any other relevant drawing.

46. OPERATING INSTRUCTION & MAINTENANCE MANUAL

Upon completion and commissioning of part Electrical system the contractor shall submit a draft copy of comprehensive operating instructions, maintenance schedule and log sheets for all systems and equipment included in this contract. This shall be supplementary to manufacturer's operating and maintenance manuals. Upon approval of the draft, the contractor shall submit four

(4) complete bound sets of typewritten operating instructions and maintenance manuals. These manuals shall also include basis of design, detailed technical data for each piece of equipment as installed, spare parts manual and recommended spares for 5 year period of maintenance of each equipment.

47. ON SITE TRAINING

Upon completion of all work and all tests, the Contractor shall furnish necessary operators, labour and helpers for operating the entire installation for a period of thirty (30) working days of ten (10) hours each, to enable the engineer-in-charge and his duly authorized representatives to get acquainted with the operation of the system. During this period, the contractor shall train the engineer-in-charge's personnel in the operation, adjustment and maintenance of all equipment installed.

48. MAINTENANCE DURING DEFECTS LIABILITY PERIOD Complaints

The Contractor shall receive calls for any and all problems experienced in the operation of the system under this contract, attend to these within 24 hours of receiving the complaints and shall take steps to immediately correct any deficiencies that may exist.

Repairs

All equipments that require repairing shall be immediately serviced and repaired. Since the period of Mechanical Maintenance runs concurrently with the defects liability period, all replacement parts and labour shall be supplied promptly free-of-charge to the engineer-in-charge.

49. METHOD OF MEASUREMENT

The works shall be measured in accordance with relevant IS codes notwithstanding any general or local custom except where otherwise specifically described or prescribed in the contract.

50. DEMONSTRATION TO ENGINEER-IN-CHARGE:

At completion, devices subject to manual operation shall be operated at least five times in presence of engineer-in-charge's site representative to demonstrate satisfactory operation.

51. PREPARATION AND APPROVAL OF DRAWING

On award of the work, the contractor has to prepare working drawings and submit to the Engineer-in-Charge for approval. This drawing shall be prepared after considering all the services, viz. conduits, pipes, horticulture, plumbing etc. The work is to be executed as per approved drawings.

52. The associate shall attend the inspection of the work by the Engineer-in-Charge as and when required.

53. The rates quoted shall be inclusive of all taxes and duties, no extra shall be paid on this account.

54. Agency must adhere to "Quality assurance policy & checklist for E&M services 2016" regarding testing of materials as given on CPWD Portal, It is the responsibility of contractor to get all materials tested from Third Party Labs(as per approved from competent authority) as per mentioned by Engineer in Charge before execution of that particular item.

55. Sample selection for testing of material shall be done as per "Quality assurance policy & checklist for E&M services 2016."

ADDITIONAL SPECIFICATIONS FOR**(Internal and External Electrical Installations)**

1.0 All the works shall be carried out as per CPWD General Specifications for Electrical Works Part-I (Internal) 2023 & Part-II (External) 2023, amended up to the last date of submission of tender.

2.0 Conformity to IE act, IE Rules, and standards:

All electrical works shall be carried out in accordance with the provisions of Indian Electricity Act, 1910 and Indian Electricity Rules, 1956 amended up to the last date of submission of tender unless specified otherwise. List of rules of particular importance to electrical installations under these General Specifications for internal works is given for reference.

3.0 General requirements of components:

3.1 Quality of material: All materials and equipments supplied by the contractor shall be new. They shall be of such design, size and materials as to satisfactorily function under the rated conditions of operation and to withstand the environmental conditions at site.

The model of equivalent make shall be approved by Engineer – in- charge on producing relevant paper of the model and equivalent make shall be equal or more rich specification.

3.2 Use of quality materials: Only quality materials of reputed make as specified in the tender will be used in work.

3.3 The contractor shall arrange carrying out of all tests required under the agreement through the laboratory as approved by the Engineer-in-Charge and shall bear all charges in connection therewith including fee for testing. Samples of all materials, fittings and other materials/articles required for execution of the work shall be got approved from the Engineer-in-charge. Materials / articles manufactured by the firms of repute as indicated in tender documents and approved by the Engineer-in-charge shall only be used. **The date of manufacturing of All the equipment and materials shall not be more than Six months old from the date of award of work.**

All the materials and equipments shall be procured directly from manufacturer or authorized dealers only.

3.4 Even ISI marked materials shall be subjected to quality test at the discretion of the Engineer-in-charge besides testing of other materials as per the specifications described for the item/material. Whenever ISI marked materials are brought to the site of work; the contractor shall, if required by the Engineer-in-Charge, furnish manufacturers test certificates to establish that the materials procured by the contractor for incorporation in the work satisfy the provisions of IS codes relevant to the material and/or the work done.

3.5 The MCB should be 10 KA breaking Capacity and of same make as that of MCB DBs.

3.6 The fan box cover shall be made from 3mm thick phenolic laminated sheet as per CPWD specification.

3.7 The contractor shall provide only metallic junction boxes/looping boxes with cover of required sizes even in PVC conduiting and such boxes shall be measured as a part of conduit/wiring without any extra payment.

3.8 The metallic junction boxes & looping boxes shall be covered with approved makes of phenolic laminated sheet. For telephone, television & fire alarm system shall be provided at all the floors within scope of work without any extra cost as per requirement & layout approved by Engineer-in-charge.

4.0 Ratings of components:

4.1 All components in a wiring installation shall be of appropriate ratings of voltage, current and frequency, as required at the respective sections of the electrical installations in which they are used.

4.2 All conductors, switches and accessories shall be of such size as to be capable of carrying the maximum current, which will normally flow through them, without their respective ratings being exceeded.

5.0 Conformity to standards:

5.1 All components shall confirm to relevant Indian Standard Specifications wherever existing. Materials with ISI certification mark shall be preferred.

5.2 Relevant Indian Standards including amendments or revisions thereof up to the last date of submission of tender shall be applicable in the respective contracts for respective items, firm to ensure its compliance.

5.3 The connections of switches, sensors, earthing conductors & interconnections cables shall be made by adequate rating thimbles of approved standard makes only and nothing extra on this account shall be paid.

5.4 Material to be used in the work shall be ISI marked. The make of material have been indicated in the list of acceptable makes. No other make will be acceptable. The material to be used in the work shall be got approved from the Engineer-in-charge before its use at site. The Engineer-in-charge shall reserve the right to instruct the contractor to remove the material which, in his opinion, is not as per specifications.

5.5 Modular type switches / sockets / telephone outlets / TV sockets are to be provided wherever indicated in the items. The same shall be of only one make. The modular plates of switches, sockets, telephone & TV sockets etc. shall be in two parts i.e. plates with frames with in quoted rates.

6.0 Interchangeability:

Similar parts of all switches, lamp holders, distribution fuse boards, Switch gears, ceiling roses, brackets, pendants, fans and all other fittings of the same type shall be interchangeable in each installation.

7.0 Inspection of materials and equipments:

7.1 Materials and equipments to be used in the work shall be inspected by the departmental officers.

Such inspection will be of following categories:

- Inspection of materials / equipments to be witnessed at the Manufacturer's premises in accordance with relevant BIS / Agreement Inspection Procedure.
- To receive materials at site with Manufacturer's Test Certificate(s)
- To inspect materials at the authorized dealer's godown to ensure delivery of genuine materials at site.
- To receive materials after physical inspection at site.

7.2 Adequate care to ensure that only tested and genuine materials of proper quality are used in work shall be ensured by firm. The firm shall ensure that:

- Material will be ordered & delivered at site only with the prior approval of the department to ensure timely delivery.
- As and when the order is placed for the fittings / fixtures, cables, switchgears, poles, rising main, other main items etc, its copy shall be endorsed to the CPWD Engineer-in-charge.
- The firm will be required to procure material like exhaust fans, MCB's & DB's, switches & sockets, wires & cables, conduits and switchgears etc directly from the manufacturer/ authorized dealers to

ensure genuineness & quality and as per the approved makes only. Proof in this regard shall be submitted by the contractor if required by the department.

- d) Inspection at factory or at godown of the manufacturer, as required, shall be arranged by the firm for a mutually agreed date. Certificate for genuineness of the fittings shall have to be provided duly signed by the manufacturer's officer not below the rank of Regional Manager.
- e) Delivery of material shall be taken up only with the consent of department, after clearance of the material.
- f) Department shall reserve the right to waive inspection in lieu of suitable test certificate, at its discretion.

7.3 Similarly, for fabricated equipments, the contractor will first submit dimensional detailed drawings for approval before fabrication is taken up in the factory. Suitable stage inspection at factory also will be made to ensure proper use of materials, workmanship and quality control.

7.4 The contractor shall give a trial run of the equipments and machinery for establishing its capability to achieve the specifications within laid down tolerances to the satisfaction of the Engineer-in-charge before commencement of work.

8.0 Workmanship:

8.1 Good workmanship is an essential requirement to be complied with. The entire work of manufacture/fabrication, assembly and installation shall conform to sound engineering practice.

8.2 **Proper supervision/skilled workmen:** The contractor shall engage suitably skilled/licensed workmen of various categories for execution of work duly supervised by technical representative having appropriate qualification and experience to ensure proper execution of work. They will carry out instruction of Engineer-in-charge and his authorized representatives during the progress of work.

8.3 **Fabrication in reputed workshop:** Switch boards and LT panels shall be fabricated in a factory/workshop having modern facilities like quality fabrication, seven tank processes, powder / epoxy paint plant, proper testing facilities, manned by qualified technical personnel. These shall be as per make / item approved.

8.4 The contractor shall have to engage well experienced skilled labour and deploy modern T&P and other equipments to execute the work.

9.0 Provisions for services and proper planned work:-

9.1 The main contractor shall leave such recesses, holes, openings, etc., as may be required for the electric, air conditioning and other related works. The main contractor has also to fix inserts, sleeves, brackets, conduits, base plates, insert plates, clamps etc if any at the time of casting of concrete, stone work & brick work. These inserts, sleeves, brackets, conduits, base plates, insert plates, clamps etc shall be arranged by the contractor and shall be paid accordingly if these are not the part of equipment for which it is being provided.

9.2 The contractor shall ensure quality construction in a planned and time bound manner. Any substandard material or work which is not within permissible tolerance limits shall be summarily rejected by the Engineer-in-Charge.

- 9.3 The contractor shall make sample as per timeline mentioned in the milestone given of this tender document using all approved materials, for approval of Engineer-in-charge before commencement of execution of mass scale work.
- 9.4 Check nuts shall be provided while terminating the M.S. conduits in switch board boxes for which nothing extra shall be paid.
- 9.5 All distribution boards shall be marked with circuits controlling the rooms/area/SDB controlled.
- 9.6 While deciding the size of switch boxes for light points / fan point / exhaust fan point, two extra modules shall be provided for each fan point for fixing of regulator (fan regulator is to be provided under different item). Wherever extra modules are available, the same shall be provided with blanking plates without any extra cost.
- 9.7 Contractor will not provide any ceiling rose/connector/looping box etc wherever false ceiling is being provided. The point wiring in that case will be extended up to the fitting/fan etc. directly without provisions of any termination arrangement in between. The wire from the end point up to the fixture shall be considered to be included in the point wiring. Nothing extra shall be paid for the same.
- 9.8 Wherever providing of rigid conduits is not possible, flexible conduit pipe shall be provided for drawing/running the wires. However, such arrangement has to be kept minimum and only with the prior approval of Engineer-in-charge or his authorized representative.
- 9.9 Earthing and all items of work that cannot be checked later on are to be got approved from Engineer-in-charge or his authorized representative before proceeding further.
- 9.10 The firm shall use only electrically operated chase cutting machine for cutting the chases in the wall for recessed conduit wiring.
- 9.11 The contractor shall follow the shortest route for circuits, sub main, point wiring etc.
- 9.12 Colour coding as per specification shall be adopted in the wiring system.
- 9.13 Tinned copper earthing lugs / Thimbles / ferrules shall be provided for termination of earth wire to all Metallic outlet boxes / fittings / fixtures / fan regulator / MCB DB / switch board / Meter board etc., properly crimped / brazed / soldered for which nothing extra shall be paid.
- 9.14 A suitable brass / tinned copper neutral link shall be fixed at suitable place in the Metallic outlet boxes of all sizes to terminate neutral wire properly. Nothing extra shall be paid on this account.
- 9.15 Metal sheath of Co-axial T.V. cable shall be terminated using 'U' shape thimble / lugs / ferrules. Nothing extra shall be paid on this account.
- 9.16 To facilitate drawing of wires 16 / 18 SWG GI fish wire shall be provided along with laying of recessed conduit. Nothing extra shall be paid on this account.
- 9.17 All hardware items such as screws, thimbles, connectors, earth / neutral terminals, wires etc. which are essentially required for completing any item as per specifications will be deemed to have been included in the item even when the same have not been specifically mentioned.
- 9.18 All hardware material such as nuts / bolts / screws / washers etc. to be used in the work shall be zinc / cadmium plated iron. The galvanised boxes of modular switch / sockets etc. shall be of the same make as of switch / socket etc.
- 9.19 While laying conduit, suitable minimum number of junction boxes shall be left for pulling the wires. These shall be placed in such a way that the same do not remain noticeable.

9.20 A suitable brass / tinned copper neutral link shall be fixed at suitable place in the Metallic outlet boxes of all sizes to terminate neutral wire properly. Nothing extra shall be paid on this account.

9.21 The ceiling roses wherever required to be provided are included in the scope of work without extra payment and the same shall also be of modular type & of the same make as that of switches & sockets along with earthing provision.

10.0 Testing:

All tests prescribed in this General Specification to be done before, during and after installation shall be carried out, and the details of test results shall be submitted to the Engineer-in-charge in approved format, that shall form part of the completion certificate of this component.

11.0 Commissioning on completion:

After the work is completed, it shall be ensured that the installation is tested and commissioned.

12.0 Completion plan and completion certificate along with guarantee:

12.1 The main contractor through his associate shall submit completion plan as required vide General Specifications for Electrical works (Part-I internal) 2023 and (Part-II External) 2023 as applicable within time as stipulated in milestones.

In case, the main contractor fails to submit the completion plan as aforesaid, he shall be liable to pay a sum equivalent as stipulated in clause-8B of General Condition of Contract – 2014 amended up to last date of submission of tender.

12.2 Three sets of completion plan as well as in soft copy drawn to a suitable scale indicating the following shall also be submitted:

- (i) General layout of the building.
- (ii) Locations of main switchboard and distribution boards, indicating the circuit numbers controlled by them.
- (iii) Position of all points and their controls.
- (iv) Types of fittings, viz. fluorescent, pendants, brackets, bulk head, fans, exhaust fans etc.
- (v) Name of work, job number, tender reference, actual date of completion, names of Division/Sub-division and name of the main contractor and associate both who executed the work with their signature.

12.3 Guarantee: The complete installation will be handed over to the department after necessary testing and commissioning. The installation will be guaranteed against any defective design / workmanship. Similarly,

the materials supplied by the contractor will be guaranteed against any manufacturing defect, inferior quality. The guarantee period will be for a period of 12 months from the date of handing over of installation to the department. Installation/ equipments or components thereof shall be rectified/ repaired to the satisfaction of the Engineer-in-charge. Guarantee on material/equipment given by the manufacturer whatsoever have to be submitted by the main contractor and his associate to the department.

- 13.0 The main contractor and his associate has to go through the site order book regularly and has to sign the same by authorized representative and carryout the instructions recorded therein by various officers of the department.
- 14.0 The quantities of various items may vary from the quantities given in schedule of work. The agency shall bring the various items & materials as per actual requirement at site. Excess quantities shall not be accepted & paid by the department.

The firm to submit LM 79 & LM 80 report of each make and model of **LED fitting** & will be furnish a Guarantee Certificate for a period of minimum **Five Years** from OEM/ Authorized dealer.

The contractor shall give five years performance guarantee in the prescribed proforma for the LED fittings. In addition 5% (Five percent) of the cost of LED fittings shall be retained as security, to watch the performance of the work executed. At the same time, whole of this amount (withheld) shall be released only after expiry of 5 years, after the completion of the work, if no defect comes to notice. If any defect is noticed during the guarantee period, it shall be rectified by the contractor within Seven days after serving the notice by Department and, if not attended to, the same shall be got done through other agency at the risk and cost of the contractor. In any case the guaranteeing firms during the guarantee period shall inspect and examine the LED fittings once every year and make good any defect observed and Certificate to that effect shall be submitted to Department every year. However, the 5% security deposit referred above can be replaced with bank guarantee of equivalent amount for relevant period.

List of Approved Materials (Electrical)

1. Unless otherwise specified, the brand/make of the material as specified in the item nomenclature or in the particular specifications or in the list of approved materials attached in the tender, shall be used in the work.
2. The Contractor shall obtain prior approval from the Engineer-in-charge before placing order for any specific material/Brand/Make.
3. Whenever the specified brand of material is not available than, the Engineer-in-charge may approve any material equivalent to that specified subject to proof being offered by the Contractor for its equivalence and its non-availability to his satisfaction.

Sl. No.	Item	Acceptable Makes
1	FRLS PVC insulated Copper wire, Telephone wire, TV wire, Control Cable, , Cat 6 cable (All ISI Marked)	R.R. Kabel / Finolex / Havell's / Polycab/KEI /Gloster (All with ISI mark)
2	MCB / MCB- DB/RCCB /Isolator; ELCBS / Loose wire box/ multifunction energy metre etc (Any one make shall be followed for power & DB's.	Legrand /LK / Siemens / Schneider/ Hager
3	MCCB (ICS=100% ICU at 415V) /	Legrand /LK/ Siemens/ Schneider / Hager (Any one make shall be followed for all panels & DB's)
4	PVC Conduit & Accessories (ISI Marked)	Pressfit/Polycab/AKG/Precision
5	LED Fitting/wall bracket fitting	Phillips / Lightning Technology/ Havells/ Wipro/Crompton
6	BLDC Fan/ Exhaust Fan	Havells/Crompton/Usha/Atomberg/Orient/Bajaj
7	Junction Box	Hensel / Rittal / Schnieder / Emitter
8	GI Pipe	Jindal (Hisar)/Prakash Surya/TATA/SAIL
9	Modular 6/16 Amp. Switch , Socket, Blanking Plate, Metal Switch Box (the gauge of switch Box shall not less than 18 SWG & of the same make that of Switch) Front Plates, Telephone, T.V. Outlets Socket, Fan Regulator & other modular accessories.	Legrand (Arteor)/ Schneider (Unica)/ Honeywell MK (Orna)
10	XLPE/ PVC insulated PVC sheathed 1.1 KV grade Al. conductor armoured UG cable (ISI Marked).	R.R. Kabels / Finolex / Polycab/ KEI / Gloster / Havells (All with ISI Marked)
11	Brass Compression Gland	Baliga Lighting/ Comet/ Strip Well / Jainson/HMT
12	DWC HDPE Pipe	REX/Duraline/Gemini/Supreme

Note: All makes for which approved has been issued by regional office till last date of submission of tenders are also deemed to be approved.

Schedule of Work

Name of Work :- Renovation, Upgradation of Electrical works in Block-F (4 Nos, Campus Wall Side) Type - III Quarters at Narcotics Residential Quarter, Neemuch (M.P.)

Sr.No.	Description of Item	Qty	Unit	Rate	Amount
	<u>SH-I (Wiring)</u>				
1	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 surface / recessed medium class PVC conduit, with modular switch, modular plate, suitable GI box and earthing the point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable etc. as required.				
1.1	Group A	80	Point	1189	95120
2	Wiring for twin control light point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable in surface / recessed medium class PVC conduit, 2 way modular switch, modular plate, suitable GI box and earthing the point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable etc. as required.	4	Point	1803	7212
3	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.				
3.1	2 X 10 sq. mm + 1 X 6 sq. mm earth wire	90	Mtrs	621	55890
4	Supplying and drawing following sizes of FRLS PVC insulated copper conductor, single core cable in the existing surface/ recessed steel/ PVC conduit as required.				
4.1	3 x 1.5 sq. mm	200	Mtrs	104	20800
4.2	6 x 1.5 sq. mm	100	Mtrs	195	19500
4.3	3x 4 sq mm	350	Mtrs	222	77700
4.4	6x 4 sq mm	180	Mtrs	424	76320
5	Supplying and drawing co-axial TV cable RG-6 grade, 0.7 mm solid copper conductor PE insulated, shielded with fine tinned copper braid and protected with PVC sheath in the existing surface/ recessed steel/ PVC conduit as required.	200	Mtrs	54	10800
6	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.				
6.1	20 mm	550	Mtrs	151	83050
6.2	25 mm	480	Mtrs	168	80640

ADDITION NIL, CORRECTION NIL

INSERTION NIL, CUTTING NIL

AE(E) (P)

7	Supplying and fixing following modular switch/ socket on the existing modular plate & switch box including connections but excluding modular plate etc. as required.				
7.1	TV antenna socket outlet	12	Nos.	168	2016
8	Supplying and fixing two module stepped type electronic fan regulator on the existing modular plate switch box including connections but excluding modular plate etc. as required.	12	Nos.	402	4824
9	Supplying and fixing modular blanking plate on the existing modular plate & switch box excluding modular plate as required.	40	Nos.	47	1880
10	Supplying and fixing following size/ modules, GI box alongwith modular base & cover plate for modular switches in recess etc. as required.				
10.1	1 or 2 Module (75mmX75mm)	12	Nos.	354	4248
11	Supplying and fixing suitable size GI box with modular plate and cover in front on surface or in recess, including providing and fixing 3 pin 5/6 A modular socket outlet and 5/6 A modular switch, connections etc. as required.	32	Nos.	545	17440
12	Supplying and fixing suitable size GI 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.	28	Nos.	659	18452
13	Supplying and fixing call bell/ buzzer suitable for single phase, 230 V, complete as required.	4	Nos.	112	448
14	Supplying and fixing suitable size GI box with modular plate and cover in front on surface or in recess, including providing and fixing 2 nos. 3 pin 5/6 A modular socket outlet and 2 nos. 5/6 A modular switch, connections etc. as required. (For light plugs to be used in non residential buildings).	16	Nos.	757	12112
15	Supplying & fixing suitable size GI box with modular plate and cover in front on surface or in recess including providing and fixing 25 A modular socket outlet and 25 A modular SP MCB, "C" curve including connections, painting etc. as required.	16	Nos.	807	12912
16	Supplying and fixing PVC batten/ angle holder including connections etc. as required.	12	Nos.	132	1584
		Total of SH-I			602948
	<u>SH-II(Fans & Fittings)</u>				
17	Supplying, Installation, testing & commissioning of Exhaust Fan 250 mm sweep plastic ventilating fan in the existing opening i/c making the hole to suit the size of the above fan making good i/c connection as reqd. at site. (for Residential Toilet)				

ADDITION NIL, CORRECTION NIL

INSERTION NIL, CUTTING NIL

AE(E) (P)

	250 mm sweep	4	Each	2443.00	9772.00
18	Supplying Installation testing and commissioning of following size heavy duty 1400 rpm, exhaust fan along with MS louvers & shutter on suitable opening, including making the hole & repairing the damage, connection with 3 x 1.5 Sq. mm FRLS copper conductor i/c testing, commissioning etc. as required.				
	300 mm sweep heavy duty	4	Each	4182.00	16728.00
19	Supply, Installation, Testing and Commissioning of ceiling fan with Brush Less Direct Current (BLDC) Motor, class of insulation: B, 3 nos. metal(Aluminium alloy) blades, 30 cm long down rod, 2 nos. canopies, shackle kit, safety rope, copper winding, steel/Al body. Power Factor not less than 0.9, Service Value (CM/M/W) minimum as below, 350 RPM (tolerance as per IS : 374-2019), THD (Total Harmonic Distortion) less than 10%, remote (preferably mobile app based) for speed control and all remaining accessories including safety pin, nut bolts, washers, temperature rise=75 0C (max.), insulation resistance more than 2 mega ohm, suitable for 230 V, 50 Hz, single phase AC supply Ceiling Fan compliant to IS 374:2019 fan i/c external connections with 1.5 sq.mm FRLS/HFFR, PVC insulated copper conductor single core cable and earthing etc. as required.				
	1200mm, service value ≥ 6.0 CM/Min/Watt, air delivery 210 CM/Min (Minimum)	12.00	Each	2882.00	34584.00

20	Supplying, Installation, Testing & Commissioning of LED surface mounted Batten light of following body material and construction as per IS : 10322 with driver (Replaceable) as per the requirement with Driver efficiency >85%, Operating voltage AC 140- 270 Volt, frequency 50/60 hz, Operating temp range -5 °C to 40 °C, internal surge protection of 2.5 KV with Short & Open circuit protection, THD < 10%, P. F. ≥ 0.95, IP20, CRI >80, Flicker free, (flicker should be below 5 %), life time (LED, Driver & electrical circuitry), of minimum 50000 Burning Hours with 70% of initial Lumen maintained till life ends, CCT 3000°K / 4000°K / 5700°K / 6500°K (As per ANSI Bin), SDCM (Standard Deviation Colour Matching) <3, Maximum power consumption should not more than the specified rating and Fixture shall be of relevant BIS standard. Manufactures Word Mark/ Name Engraved/Embossing/ Screen printing on housing. complete in all respect i/c external connections with 1.5 sq mm FRLS/HFFR, PVC insulated copper conductor single core cable and earthing etc. as required with Minimum 5 year OEM warranty. System lumen efficacy ≥ 105 < 120 lm/Watt output . LM79 & LM80 Test report and all testing required for LED fixtures as per BIS shall be submitted. Shape size and CCT shall be as approved by Engineer-in-Charge as per requirement. (Thermal management: heat sink of aluminium housing such that LED junction temperature shall not rise above 90°C). Powder coated die cast /Extruded aluminium Body (Thickness > 1.20 mm)				
	18- 22 watt	16	Each	681.00	10896.00

21	LED Down lighter (COB Type) (System lumen efficacy ≥ 120 lm/Watt) Supplying, Installation, Testing & Commissioning of LED Recessed/surface Down lighter (Round /square/ Rectangular) COB Type of following body material and construction as per IS: 10322 with driver as per the requirement with Driver efficiency $>85\%$, Operating voltage AC 140-270 Volt, frequency 50/60 hz, Operating temp range -5°C to 40°C , internal surge protection of 2.5 KV with Short & Open circuit protection, THD $< 10\%$. P. F.20.95, IP20, CRI ≥ 80 , UGR (Unified Glare Rating) 19, Flicker free (flicker should be below 5 %), life time (LED, Driver & electrical circuitry), life time of minimum 50000 Burning Hours with, 70% of initial Lumen maintained till life ends, CCT 3000°K / 4000°K / 5700°K / 6500°K (As per ANSI Bin), SDCM(Standard Deviation Colour Matching) <3 , Maximum power consumption should not more than the specified rating and Fixture shall be of relevant BIS standard. Manufactures Word Mark/ Name Engraved/Embossing/ Screen printing on housing. OEM must have its own in house NABL lab setup for all testing facilities for LED fixtures. "complete in all respect i/c external connections with 1.5 sq mm FRLS/HFFR, PVC insulated copper conductor single core cable and earthing etc. as required with Minimum 5 year OEM warranty. System lumen efficacy ≥ 120 <135 lm/Watt output. LM79 & LM80 Test report and all testing required for LED fixtures as per BIS shall be submitted Shape size and CCT shall be as approved by Engineer-in-Charge as per requirement. (Thermal management: heat sink of aluminium housing such that LED junction temperature shall not rise above 90°C). Powder coated die cast /Extruded aluminium Body including trim with Aluminium Reflector				
	18 watt	20	Each	1470.00	29400.00
22	Supply Installation, testing & commissioning of 10 -12 watt, 5700-6500K LED mirror light (2 ft) fitting having Aluminium housing with opal diffuser & integrated electronic driver CRI >70 , PF > 0.9 , 50,000burning hours @ L 70 lifetime, suitable to operate on single phase 230 volts, 50 Hz AC Power supply i/c connection with 3 X 1.5 sq. mm PVC insulated copper conductor cable etc. as required.	4	Each	633.00	2532.00
23	Supply, Installation,Testing,Commissioning of 9-10 Watt, Wall bracket fitting with LED Lamp (9-10 watt) wall mounted and with white reflector glass diffuse with CRCA sheet and crome finish having Dia 145 mm and projection 210 mm, complete with all accessories including connection with 1.5 sq.mm. wire etc. complete as required.	12	Each	1327.00	15924.00

24	Supply, Installation, Testing and Commissioning of LED outdoor Bulk head fitting, made of pressure die cast Alumunium body, IP-66, IK-9,ripple free,, 10-12W.Alumunium extruded housing and moulded high transitivity diffuser efficacy not less than 110 lm / watt, having High grade polycarbonate / CRCA housing housing with diffused optic, CCT 5700- 6500 K, CRI >70, PF > 0.9, THD< 10%, 50,000burning hours lifetime @L70 & SPD Device of appropriate Kv to support its minimum 5 Year life warranty.	4	Each	1861.00	7444.00
25	LED Flood Light, powder coated pressure die cast aluminium (System lumen efficacy ≥ 105 <120 lm/Watt). Supplying, Installation, Testing & Commissioning of Flood Light, powder coated pressure die cast aluminium body with built in or separate driver as per the requirement with Driver efficiency >85%, Input voltage: Input voltage: 140-270 Volt AC, frequency 50/60 hz, Operating temp range -5 0C to				
	50 0C, internal surge protection of 5 KV L,N,E as per IEC 61000-4-5, Driver efficiency >85%,THD < 10% as per IEC 61000-3-2, P. F. ≥ 0.95 , IP-66,IK-10, CRI >70, under voltage and over voltage protection, EMI-EMC as per CISPR -15, lenses for beam angle 30 deg-120deg as per the application and the project requirement., suitable tilt able fitting, life time (LED, Driver & electrical circuitry) of minimum 50000 Burning Hours with 70% of initial Lumen maintained till life ends as per LM80 extrapolation IES TM-21-11 report, CCT 3000°K / 4000°K / 5700°K /6500°K (As per ANSI Bin) , SDCM(Standard Deviation Color Matching) <5, Maximum power consumption should not more than the specified rating and Fixture shall be of relevant BIS standard complete in all respect i/c external connections with 1.5 sq mm FRLS/HFFR, PVC insulated copper conductor single core cable and earthing etc. as required with Minimum 5 year OEM warranty. System lumen efficacy ≥ 105 <120 lm/Watt output .LM79 & LM80 Test report and all testing required for LED fixtures as per BIS shall be submitted.. Shape size and CCT shall be as approved by Engineer-inCharge as per requirement. (Thermal management: heat sink of aluminium housing such that LED junction temperature shall not rise above 90°C)				
25.1	150 watt	8	Nos.	3166	25328
		Total of SH-II			152608.00
	<u>SH-III (MCB, MCCB & DB)</u>				
26	Supplying and fixing following way, single pole and neutral, sheet steel, MCB distribution board, 240 V, on surface/ recess, complete with tinned copper bus bar, neutral bus bar, earth bar, din bar, interconnections, powder painted including earthing etc. as required. (But without MCB/RCCB/Isolator)				
26.1	16 way, Double door	4	Nos.	3367	13468

27	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.				
27.1	Single pole	48	Nos.	285	13680
27.2	Single pole and neutral	4	Nos.	643	2572
28	Supplying and fixing following rating, double pole, (single phase and neutral), 240 V, residual current circuit breaker (RCCB), having a sensitivity current 30 mA in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
28.1	25 A	4	Nos.	2141	8564
29	Supplying and fixing DP sheet steel enclosure on surface/ recess along with 25/32 A 240 V "C" curve DP MCB complete with connections, testing and commissioning etc. as required.	4	Nos.	1258	5032
30	Supplying and fixing Cable End Box (Loose Wire Box) suitable for following single pole and neutral, sheet steel, MCB distribution board, 240 Volts, on surface/ recess, complete with testing and commissioning etc. as required.			0	
30.1	For 14 way, Double door SPN MCBDB	4	Nos.	990	3960
		Total of SH-III			47276
	<u>SH-IV (Service Connection)</u>				
31	Supplying of one number PVC/XLPE insulated and PVC sheathed/XLPE aluminium conductor Armoured power cable 1.1 KV grade of following size in the existing RCC/ HUME/ STONEWARE/ METAL/ DWC pipe as required.				
a	3.5 X 70 sq mm	140	Metre	1171.00	163940.00
b	3x6 sqmm	250	Metre	246.00	61500.00
32	Supplying of one number PVC/XLPE insulated and PVC sheathed/XLPE Copper conductor Armoured power cable 1.1 KV grade of following size in the existing RCC/ HUME/ STONEWARE/ METAL/ DWC pipe as required.				
a	3x6 sqmm	110	Metre	863.00	94930.00
33	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 pipe as required.				
a	Upto 35 sq. mm	360	Metre	47.00	16920.00
b	Above 35 sq. mm and upto 95 sq. mm	140	Metre	72.00	10080.00

ADDITION NIL, CORRECTION NIL

INSERTION NIL, CUTTING NIL

AE(E) (P)

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 10 sq. mm (22mm)	8	Each	312.00	2496.00
b	3½ X 70 sq. mm (38mm)	4	Each	542.00	2168.00
35	Providing, laying and fixing following dia G.I. pipe (medium class) in ground complete with G.I. fittings including trenching (75 cm deep) and re-filling etc as required				
a	100 mm dia	12	Metre	1918.00	23016.00
36	Supplying and laying of following size DWC HDPE pipe ISI marked along with all accessories like socket, bend, couplers etc. conforming to IS 14930, Part II complete with fitting and cutting, jointing etc. direct in ground (75 cm below ground level) including excavation and refilling the trench but excluding sand cushioning and protective covering etc., complete as required.				
a	63 mm dia (OD-63 mm & ID-51 mm Nominal)	120	Metre	136.00	16320.00
b	90 mm dia (OD-90 mm & ID-76 mm nominal)	100	Metre	183.00	18300.00
		Total of SH IV			409670.00
	<u>SH- V (Earthing)</u>				
37	Earthing with GI Earth plate 600mm x600mmx6mm thick including Accessories and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 mtr. Long etc. with charcoal /coke and salt as required.	2	Sets	8351.00	16702.00
38	Providing and fixing 25mmx5mm GI strip in 40mm dia GI pipe from earth electrode including connections with GI nut, bolt, spring , washer, excavation and refilling etc as required.	12	Mtrs.	755.00	9060.00
39	Providing & Fixing 25mmx5mm GI strip on surface or in recess for connections etc. as required.	100	Mtrs	287.00	28700.00
		Total Of SH-V			54462.00
	<u>SH- VI (Panels and Junction Box)</u>				
40	Supplying, Installation, Testing & Commissioning of Outdoor Type IP 65 Energy meter Feeder pilaar Dust & Vermin Proof IP-65 Protection of Size 1400mm×1200mm×350mm with hinged door to be locked with spring locked knobs made out of not less than 2mm thick CRCA sheet with following accessories in it including earth strip of suitable size complete etc as required. (Front Area Not Less than 1.68 Sq.m.) on the angle of 75x75x6 mm of minimum length 1500 mm (height of Legs) Complete etc as required.				

ADDITION NIL, CORRECTION NIL

INSERTION NIL, CUTTING NIL

AE(E) (P)

(A)	INCOMER				
a	160 Amp 4 pole 36 KA FP MCCB with thermal magnetic release, spreader link & extended rotary handle (Ics=100% Icu) - 1No.				
b	Multi function Meter (V, A, F, PF, kW, kVA, Old energy, On and Run hours,site selectable kWh/ Vah > True PF or Displacement PF site selectable) with CT 150/5				
(B)	OUTGOING				
a	Alu. bus bar chamber with bus bar of rating 250 Amp, 4 pole at 415 V, duly PVC sleeved - 1 Set.				
b	LED type Phase Indicating lamp 3 Nos. -1 Set				
c	Danger notice plate -1 No.				
d	DP MCB, 40 Amp with energy meter compartment i/c hylum sheet etc as required.- 4 Nos				
e	Space for Energy Meter device - 4 No.	1	Job	115702.00	115702.00
41	SITC of Weather proof junction box with 10 Sqmm terminal block made of thermo plastic polycarbonate with degree of protection IP-55 (ESM) and IP-66 (AKM) protection in accordance with IEC 60670-22 with front transparent lead having high grade gasket and suitable for ambient temperature range -25 C to +50 C,flame retardant and following accessories etc as required. (Approx Size-160x200x98 mm)				
	i) 10 amp SP MCB.				
	ii) Poly Carbonate Cable gland.				
	iii) Lock Nuts.				
	iv) Pole mounting kit .	12	Each	2690	32280
		Total Of SH-VI			147982.00
	Total of SH-I (Wiring)				602948.00
	Total of SH-II(Fans & Fittings)				152608.00
	Total of SH-III (MCB, MCCB & DB)				47276.00
	Total of SH-IV (Service Connection)				409670.00
	Total of SH- V (Earthing)				54462.00
	Total of SH- VI (Panels and Junction Box)				147982.00
				Total	₹ 14,14,946.00

Executive Engineer (E)
ICED, CPWD, Indore.

PROFORMA FOR QUOTING THE RATES

Name of Work: Renovation of Type-III Quarters (4 Nos. G+1) Block No. F (Campus B / Wall Side) at Central Bureau of Narcotics at Neemuch (M.P.)

NIT No.: 28/EE/Indore-I/2026-27

Sr. No.	Name of Component	Estimated Cost put to bid	Percentage above or below the estimated cost put to bid	% in figures	Total Quoted Cost
1.	Composite amount	Rs. 52,92,748/-	Above / Below / At Par		

1. Only one of the options is to be filled. More than one option will be rejected.
2. Rate filled in any form shall be considered only in %age.
3. Rate filled at any other place in the document will not be considered.
4. No condition will be accepted.

Signature of Bidder with full Address :

Date :