

Name of work: RMO of E & M services installed at Data Centre NIC at 7th Floor, 1st MSO Building, Nizam Palace, Kolkata during 2026-27 (SH: Provision of electrical power connection, LAN and service connection at NIC).

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Assistant Engineer (E)
KCESD-III, KCED-I, CPWD
Nizam Palace, Kolkata-20

**INFORMATION AND INSTRUCTIONS FOR-BIDDERS FOR E-TENDERING FORMING
PART OF BID DOCUMENT
(Applicable for inviting open bids)**

The Assistant Engineer (Electrical), Kolkata Central Electrical Subdivision No-III, KCED-I, CPWD, Nizam Palace, Kolkata – 700 020, (Mail ID: 5esdkced1cpwd@gmail.com), on behalf of President of India invites online Percentage rate e-tenders from **“Eligible CPWD registered contractors of appropriate class in Building & Roads”** for following works.

Sl. No.	NIT No.	Name of Work & Location	Estimated Cost put to bid (Rs.)	Earnest Money	Stipulated Period of Completion of Work (in months)	Last date of online submission of bid, copy of receipt deposition of original EMD and other documents as specified in the bid document.	Date & time of opening of bid
1	2	3	4	5	6	7	8
1	73/AE(E)/KCESD-III/KED-I/CPWD/2026-27	RMO of E & M services installed at Data Centre NIC at 7th Floor, 1st MSO Building, Nizam Palace, Kolkata during 2026-27 (SH: Provision of electrical power connection, LAN and service connection at NIC)	Rs. 2,81,099.00	Rs. 5,622.00	01 (One) Month	27.10.2026 Up to 3:00 PM	27.10.2026 at 3:30 PM

- The intending bidder must read the terms and conditions of CPWD-6 carefully. He should only submit his bid if he considers himself eligible and he is in possession of all the documents required.
- Information and instructions for bidders posted on website shall form part of bid document
- The bid document consisting on plans, specification, the schedule of quantities of various types of items to be executed and the set of terms and conditions of the contract to be complied with and other necessary documents can be seen and downloaded from website <https://etender.cpwd.gov.in> free of cost.
- But the bid can only be submitted after deposition of original EMD either in the office of Executive Engineer inviting bids or division office of any Executive Engineer, CPWD within the period of bid submission and uploading the mandatory scanned documents such as Demand draft or Pay order or Bankers Cheque or Deposit at Term Deposit Receipt or Fixed Deposit Receipts and Bank Guarantee of any schedule bank towards EMD in favour of **Executive Engineer(E)/KCED-I/CPWD/Kolkata**, receipt for deposition of original EMD to division office of any Executive Engineer (including NIT issuing EE/AE), CPWD and other documents are specified.

5. Those contractor not registered on the website mentioned above, are required to get registered beforehand. If needed they can be imparted training on online bidding process as per details available on the website.
6. The intending bidder must have valid class-III digital signature to submit the bid.
7. On opening date, the contractor can login and see the bid opening process. After opening of bids he will receive the competitor bid sheet.
8. Contractor can upload documents in the form of JPG format and PDF format.
9. Contractor must ensure to quote rate in the column (5) meant for quoting rate in figures appears in pink colour and the moment rate is entered, it turns sky blue.

In addition to this, while selecting any of the cells a warning appears that if any cell is left blank the same shall be treated as “0”. Therefore, if any cell is left blank and no rate is quoted by the bidder, rate of such item shall be treated as “0” (ZERO).

However, if a tendered quoted nil rates against each item in item rate tender or does not quote any percentage above/below on the total amount of the tender or any section/sub head in percentage rate tender, the tender shall be treated as invalid and will not be considered as lowest tendered.

10. SC/ST contractors enlisted under class V category are exempted from processing fee payable to ITI.
11. All the receipts to be received as Performance Guarantee Money, Late Fee, Deposits of works etc. should made only through E-Payment/NEFT/ RTGS using Non-Tax Receipt Portal (NTRP) of the Government of India for which they have to register themselves in Bharatkosh.gov.in before making payments. The following references should be taken care of while making payments with regards to this Division :-

a. Purpose	Deposit Works, Performance Guarantee, Late Fee
b. Payment Type	(i) Part-2, for Earnest Money (ii) Part-3, for Deposit of Works (iii) Part-5, for Performance Guarantee
c. Ministry	(030) Urban Development & Urban Poverty Alleviation
d. Pay & Accounts Office (PAO)	043460 – PAO (East Zone), CPWD, Kolkata
e. Drawing & Disbursing Officer (DDO)	143491- Executive Engineer (EL), Kolkata Central Electrical Division - I, CPWD, Kolkata

List of mandatory Documents to be scanned and uploaded within the period of bid submission:

- I. Demand Draft/Pay order or Banker`s Cheque /FDR/Bank Guarantee of any Scheduled Bank against EMD.
- II. Valid CPWD Enlistment order of the contractor.
- III. Valid Electrical License or undertaking as per Enlistment Rule as follows :
- IV. GST Registration Certificate of the State in which the work is to be taken up, if already obtained by the bidder.
- V. Deposition of Original EMD Format.
- VI. Copy of ERP Training Certificate.

To be submitted along with bid in percentage rate.

Undertaking for GST

If the bidder has not obtained GST registration in the State in which the work is to be taken up, or as required by GST authorities then in such a case the bidder shall scan and upload following under taking alongwith other bid documents.

“If work is awarded to me. I/we shall obtain GST registration Certificate of the State, in which work is to be taken up, within one month from the date of receipt of award letter or before release of any payment by CPWD, whichever is earlier, failing which I/We shall be responsible for any delay in payments which will be due towards me/us on a/c of the work executed and/or for any action taken by CPWD or GST department in this regard.

Undertaking for Electrical License

This is to undertake that I/we will either obtain valid Electrical License at the time of execution of electrical work or associate contractors/agencies having valid electrical license of eligible class.

If the above mentioned documents are not scanned and uploaded within the period of bid submission the bid shall be treated as invalid and canceled

Assistant Engineer (E)
KCESD-III, KCED-I, CPWD
Nizam Palace, Kolkata-20

Deposition of Original EMD Format

Information and instruction for Executive Engineer for e-tendering

1. The Executive Engineer of all divisions of CPWD should receive the original EMD for tender of other division.
2. The NIT approving authority/ EE at the time of issue of NIT shall also fill and upload the following prescribed format of receipt of deposition of original EMD along with NIT: -

Receipt of deposited of Original EMD

(Receipt No. _____ / Date: _____)

1. **Name of work:** RMO of E & M services installed at Data Centre NIC at 7th Floor, 1st MSO Building, Nizam Palace, Kolkata during 2026-27 (SH: Provision of electrical power connection, LAN and service connection at NIC).
2. NIT No.: 73/AE(E)/KCESD-III/KCED-I/CPWD/2026-27
3. Estimated Cost : Rs.2,81,099.00
4. Amount of Earnest Money Deposit: Rs. 5,622.00
5. Last date of submission of bid: 27.10.2026, Upto 03:00 P.M.

(* To be filled by NIT by approving authority / EE at the time of issue of NIT and uploaded along with NIT)

(EMD should be drawn in favour of Executive Engineer (E), KCED-I, CPWD, Kolkata)

1. Name of the Contractor:
2. Form of EMD:
3. Amount of Earnest Money Deposit: Rs.
4. Date of submission of EMD:

Signature, Name and Designation of EMD
Receiving officer (EE/AE (P)/AE/AAO) along with office
stamp

(# To be filled by EMD receiving EE)

CPWD-6 for E-Tendering

On line percentage rate bids are invited on behalf of President of India from “**Eligible CPWD registered contractors of appropriate class in Building & Roads**” for following work “RMO of E & M services installed at Data Centre NIC at 7th Floor, 1st MSO Building, Nizam Palace, Kolkata during 2026-27 (SH: Provision of electrical power connection, LAN and service connection at NIC).

The enlistment of the contractors should be valid on the last date of submission of bids.

In case the last date of submission of bid is extended, the enlistment of contractor should be valid on the original date of submission of bids.

1.1 The work is estimated to cost **Rs.2,81,099.00.** This estimate, however, is given merely as a rough guide.

1.1.1 The authority competent to approve NIT for the combined cost and belonging to the major discipline will consolidate NITs for calling the bids. He will also nominate Division which will deal with all matters relating to the invitation of bids.

For composite bid, besides indicating the combined estimate cost put to bid, should clearly indicate the estimate cost of each component separately, the eligibility of bidders will correspond to the combined estimated cost of different components put to bid.

1.2 Intending bidders is eligible to submit the bid provided he has definite proof from the appropriate authority, which shall be to the satisfaction of the competent authority, of having satisfactorily completed similar works of magnitude specified below:-

To become eligible for issue of bid, the bidders 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 to bidding in CPWD in future forever. Also, if such as violation comes to the notice of Department before date of start of work, the Engineer-in-Charge shall be free of forfeit the entire amount of Earnest Money Deposit/Performance Guarantee. (Scanned copy to be uploaded at the time of submission of bid)

1.2.3 When bids are invited from non CPWD contractors and CPWD class II contractors as per provisions of **clause 1.2.1** above, it will be mandatory for non CPWD contractors and CPWD class II contractors to upload the works experience certificate (s) and the affidavit as per the provisions of **clause 1.2.2.**

But for such bids, Class-I contractors of CPWD are eligible to submit the bids without submission of work experience certificate and affidavit. Therefore CPWD class-I contractors shall upload two separate letters for experience certificate and affidavit that these documents are not required to be submitted by them. Uploading of these two letters in mandatory otherwise system will not clear mandatory fields.

2. Agreement shall be drawn with the successful bidders on prescribed Form No. CPWD 7/8 (or other Standard Form as mentioned) which is available as a Govt. of India Publication and also available on website www.cpwd.gov.in. Bidders shall quote his rates as per various terms and conditions of the said form which will form part of the agreement.
3. The time allowed for carrying out the work will be **01(One) Month** from the date of start as defined in schedule 'F' or from the first date of handing over of the site, whichever is later, in accordance with date phasing, if any, indicated in the bid documents.
4. The site for the work is available.

OR

~~The site for the work shall be made available in parts as specified below:-~~

.....

....

- (ii) The architectural and structural drawing for the work is available

OR

The architectural and structural drawings shall be made available in phased manner, as per requirement of the same as per approved programme of completion submitted by the contractor after award of work.

5. The bid document consisting of plants, specifications, the schedule of quantities of various types of items to be executed and the set of terms and conditions of the contract to be complied with and other necessary documents except Standard General Conditions of Contract Form can be seen on website <https://etender.cpwd.gov.in> in free of cost.
6. After submission of the bid the contractor can re-submit revised bid any number of times but before last time and date of submission of bid as notified.
7. While submitting the revised bid, contractor can revise the rate of one more items (s) any number of times (he need not re-enter rate of all the items) but before last time and date of submission of bid as notified.
8. When bids are invited in three stage system and if it is desired to submit revised financial bid then it shall be mandatory to submit revised financial bid. If not submitted then the bid submitted earlier shall become invalid.
9. Earnest Money in the form of Treasury Challan or Demand Draft or Pay Order or Banker's Cheque or Deposit at Term Deposit Receipt or Fixed Deposit Receipt (drawn in favour of **Executive Engineer (E), KCED-I, CPWD, Kolkata**) shall be scanned and uploaded to the e-Tendering website within the period of bid submission. The original EMD should be deposited either in the office of Assistant Engineer inviting bids or division office of any Executive Engineer, CPWD within the period of bid submission. The EMD receiving Executive Engineer (including NIT issuing EE/AE) shall issue a receipt of deposition of earnest money deposit to the bidder in a prescribed format (enclosed) uploaded by tender inviting AE in the NIT.

A part of earnest money is acceptable in the form of bank guarantee also. In such case, minimum 50% of earnest money or Rs. 20 lac, whichever is less, shall have to be deposited in shape prescribed above, and balance may be deposited in shape of Bank Guarantee of any schedule bank having validity for six months or more from the last date of receipt of bids which is to be scanned and uploaded by the intending bidders.

Copy of Enlistment Order and certificate of work experience and other documents as specified in the press notice shall be scanned and uploaded to the e-Tendering website within the period of bid submission. However, certified copy of all the scanned and uploaded documents as specified in press notice shall have to be submitted by the lowest bidder only along with physical EMD of the scanned copy of EMD uploaded within a week physically in the office of tender opening authority. Online bid documents submitted by intending bidders shall be opened only of those bidders, whose original EMD deposited with any division of CPWD and other documents scanned and uploaded are found in order.

- 9A The contractors registered prior to 01.04.2015 on e-tendering portal of CPWD shall have to deposit tender processing fee at existing rates, or they have option to switch over to the new registration system without tender processing fee any time.

The bid submitted shall be opened at 03:30 PM on 27.10.2026

10. The bid submitted shall become invalid and e-Tender processing fee shall not be refunded it:
- (i) The bidder is found ineligible
 - (ii) The bidder does not upload scanned copies of all the documents stipulated in the bid document.
 - (iii) If any discrepancy is noticed between the documents as uploaded at the time of submission of bid and hard copies as submitted physically by the lowest bidder in the office of bid opening authority.
 - (iv) If a tendered quotes nit rates against each item in item rate tender or does not quoted any percentage above/below on the total amount of the tender or any section/sub head in percentage rate tender, the tender shall be treated as invalid and will not be considered as lowest tendered.
11. The contractor whose bid is accepted will be required to furnish performance guarantee of **5 % (Five Percent)** of the bid amount within the period specified in Schedule F. This guarantee shall be in the form of Term Deposit Receipt of any scheduled Bank/Banker's cheque of any scheduled Bank/Demand Draft of any schedule Bank/Pay order of any scheduled Bank (in case guarantee amount is less than Rs. 1,00,000/-) or Government Securities or Fixed Deposit Receipts or Guarantee Bonds of any Schedule Bank or the State Bank of India in accordance with the prescribed form. In case the contractor fails to deposit the said performance guarantee within the period as indicated in Schedule.

‘F’, including the extended period if any, the Earnest Money deposited by the contractor shall be forfeited automatically without any notice to the contractor. The earnest money deposited along with bid shall be returned after receiving the aforesaid performance guarantee. The contractor whose bid is accepted will also be required to furnish either copy to applicable licenses/registrations or proof of applying for obtaining labour licenses, registration with EPFO, ESIC and BOCW welfare Board including Provident Fund Code No. if applicable and also ensure the compliance of aforesaid provisions by the sub contractors, if any engaged by the contractor for the said work and programme chart (Time and Progress) within the period specified in Schedule F.

12. The description of the work is as follows:

Intending Bidders are advised to inspect and examine the site and its surroundings and satisfy themselves before submitting their bids as to the nature of the ground and sub-soil (so far as is practicable), the form and nature of the site, the means of access to the site, the accommodation they may require and in general shall themselves obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect their bid. A bidder shall be deemed to have full knowledge of the site whether he inspects it or not and no extra charge consequent on any misunderstanding or otherwise shall be allowed. Submission of a bid by a bidder implies that he has read this notice and all other contract documents and has made himself aware of the scope and specifications of the work to be done and of conditions and rates at which store, tools and plant, etc. will be issued to him by the Government and local conditions and other factors having a bearing on the execution of the work.

13. The competent authority on behalf of the President of India does not bind itself to accept the lowest or any other bid and reserves to itself the authority to reject any or all the bids received without the assignment of any reason. All bids in which any of the prescribed condition is not fulfilled or any condition including that of conditional rebate is put forth by the bidder shall be summarily rejected.
14. Canvassing whether directly or indirectly, in connection with bidders is strictly prohibited and the bids submitted by the contractors who resort to canvassing will be liable for rejection.
15. The competent authority on behalf of President of India reserves to himself the right of accepting the whole or any part of the bid and the bidder shall be bound to perform the same at the rate quoted.
16. The contractor shall not be permitted to bid for works in the CPWD circle (Division in case of contractors of Horticulture/Nursery category) responsible for award and execution of contracts, in which his near relative is posted a Divisional Accountant or as an officer in any capacity between the grades of Superintending Engineer and Junior Engineer (both inclusive). He shall also intimate the names of persons who are working with him in any capacity or are subsequently employed by him and who are near relatives to any gazetted officer in the Central Public Works Department or in the Ministry of Urban Development. Any breach of this condition by the contractor would render him liable to be removed from the approved list of contractors of this Department.

17. No Engineer of Gazetted Rank or other Gazetted Officer employed in Engineering or Administrative duties in an Engineering Department of the Government of India is allowed to work as a contractor for a period of one year after his retirement from Government service, without the prior permission of the Government of India in writing. This contract is liable to be cancelled if either the contractor or any of his employees is found any time to be such a person who had not obtained the permission of the Government of India as aforesaid before submission of the bid or engagement in the contractor's service.
18. The bid for the works shall remain open for acceptance for a period of **thirty days (30) – days** from the date of opening of bids in case of single bid system/~~sixty (60) days from the date of opening of technical bid in case bids are invited on 2 or 3 bid envelop system.~~ (Strike out as the case may be). If any bidders withdraws his bid before the said period or issue of letter of acceptance, whichever is earlier, or makes any modifications in the terms and conditions of the bid which are not acceptable to the department, then the Government shall, without prejudice to any other right or remedy, be at liberty to forfeit 50% of the said earnest money as aforesaid. Further the bidders shall not be allowed to participate in the rebidding process of the work.
19. This notice inviting Bid shall form a part of the contract document. The successful bidders/contractor, on acceptance of his bid by the Accepting Authority shall within 15 days from the stipulated date of start of the work, sign the contract consisting of:-
- (a) The Notice Inviting Bid, all the documents including additional conditions, specification and drawings, if any, forming part of the bid as uploaded at the time of invitation of bid and the rates quoted online at the time of submission of bid and acceptance thereof together with any correspondence leading thereto.
 - (b) Standard C.P.W.D. Form 7/8 or other Standard C.P.W.D. Form as applicable.

Assistant Engineer (E)
KCESD-III, KCED-I, CPWD
Nizam Palace, Kolkata-20

CPWD-7/8

CPWD

**GOVERNMENT OF INDIA
CENTRAL PUBLIC WORKS DEPARTMENT**

Percentage Rate Tender / ~~Item Rate Tender~~ & Contract for Works

(A) Tender for the work of “RMO of E & M services installed at Data Centre NIC at 7th Floor, 1st MSO Building, Nizam Palace, Kolkata during 2026-27 (SH: Provision of electrical power connection, LAN and service connection at NIC)”.

(i) To be submitted/uploaded by.....**15.00**..... hours on **27.10.2026** upload <https://etender.cpwd.gov.in>

(ii) To be opened in presence of tenderers whom be present at **15-30** hours on **27.10.2026** in the office of **Assistant Engineer (E), Kolkata Central Electrical Sub-Division-III, KCED-I, CPWD, Kolkata.**

Issued to*

Signature of officer issuing the documents*

Designation*

Date of Issue*

*Note Applicable for e-tender

TENDER

I/We have read and examined the notice inviting tender, schedule, A,B,C,D,E & F Specifications applicable, Drawings & Designs, General Rules and Directions, Conditions of Contract, of 2014 with up to date amendments clauses of contract, Special conditions, Schedule of Rate & other documents and Rules referred to in the conditions of contract and all other contents in the tender document for the work.

I/We hereby tender for the execution of the work specified for the President of India within the time specified in Schedule F' viz., schedule of quantities and in accordance in all respect with the specifications, designs, drawing and instructions in writing referred to in Rule-1 of General Rules and Directions and in Clause 11 of the Conditions of contract of 2010 with up to date amendments and with such materials as are provided for, by, and in respect of accordance with, such conditions so far as applicable.

We agree to keep the tender open for ~~ten/fifteen/thirty/fifty days~~ **ten/fifteen/thirty/fifty days (10/15/30/45/60)** – days from the due date of its opening/ ~~Ninety days from the date of opening of financial bid in case tenders are invited on 2/3 envelop system / One hundred twenty (120) days from the date of opening of technical bid in case bids are invited of 3 bids system fir specified work~~ and not to make any modification in its terms and conditions.

A sum of Rs. **5,622.00** is hereby forwarded in ~~cash~~ / receipt treasury challan / deposit at Term Deposit Receipt of a scheduled bank / fixed deposit receipt of scheduled bank / demand draft of a scheduled bank / bank guarantee issued by a scheduled bank as earnest money. If I / We, fail to furnish the prescribed performance guarantee within prescribed period. I / We agree that the said President of India or his successors, in office shall without prejudice to any other right or remedy, be at liberty o forfeit the said earnest money absolutely. Further, if I / We fail to commence work as specified, I / We agree that President of India or the successors in office shall without prejudice to any other right or remedy available in law, be at liberty to forfeit the said earnest money and the performance guarantee absolutely. The said performance guarantee shall be guaranteed to execute all the works referred to in the tender documents upon the terms and conditions contained or referred to those in excess of that limited the rates to be ~~determined~~ in accordance with the provision contained in Clause 12.2 and 12.3 of the tender form.

CPWD-7**CPWD**

Further, I / We agree that in case off or feature of Earnest Money & Performance Guarantee as aforesaid, I / We shall be debarred for participation in there-tendering process of the work.

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

I / We hereby declare that I / We shall treat the tender documents drawings and other records connected with the work as secret / confidential documents and shall not communicate information/derived there from to any person other than a person to whom I / Weam / are authorized to communicate the same or use the information in any manner prejudicial to the safety of the State.

Dated:**.....

Signature of Contractor **

Witness: **

Address: **

Postal Address **

Occupation: **

ACCEPTANCE

The above tender (as modified by you as provided in the letters mentioned here under) is accepted by me for and on behalf of the President of India for a sum of **Rs.....** (Rupees) only.

The letters referred to below shall form part of this contract agreement:-

1. No. 54(1)/KCESD-III/KCED-I/Kol/2026/ dated
2. No. 54(1)/KCESD-III/KCED-I/CPWD/2026/ dated

For & on behalf of President of India

Signature.....*.....

Dated:*.....

Designation.....*.....

**** To be filled by Contractor**

GCC 2014AMENDEDUPTODGW/CON/280, dt. 25.06.2014

PROFORMA OF SCHEDULES**CPWD****PROFORMA OF SCHEDULES**

(Separate Performa for Civil, Elect. & Hort. Works in case of Composite Tenders) (Operative Schedules to be supplied separately to each intending tenderer)

SCHEDULE 'A'

Schedule of quantities (As per PWD-3)

Page No. 40 – 42**SCHEDULE 'B'**

Schedule of materials to be issued to the contractor.

S. No.	Description of item	Quantity	Rates in figures & Words at Which the material will be charged to the contractor	Place of issue
1	2	3	4	5
Page No. Nil				

SCHEDULE 'C'

Tools and plants to be hired to the contractor

S. No.	Description	Hire charges per day	Place of Issue
1	2	3	4
		NIL	

SCHEDULE 'D'Extra schedule for specific requirements/document for the work, if any. **Attached: Page No.-****SCHEDULE 'E'**

Reference to General Conditions of contract of 2023 with up to date amendments

Name of Work	:	RMO of E & M services installed at Data Centre NIC at 7th Floor, 1st MSO Building, Nizam Palace, Kolkata during 2026-27 (SH: Provision of electrical power connection, LAN and service connection at NIC).
Estimated cost of work	:	Rs. 2,81,099.00
(i)	Earnest Money	: Rs. 5,622.00 (To be returned after receiving performance guarantee)
(ii)	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.
(iii)	Security Deposit	: <u>2.5 % of Tendered Amount</u>
(iv)	Liability Period	: 1 Year

PROFORMA OF SCHEDULES**CPWD****SCHEDULE 'F'****GENERAL RULES & DIRECTIONS:** Officer inviting tender **AE (E)/KCESD-III/KCED-I/CPWD/Kolkata**

Maximum percentage for quantity of items of work to be executed beyond which rates are to be determined in accordance with Clauses 12.2.12.3

: See below

Definitions:

2(v)	Engineer-in-Charge	<u>AE (E)/KCESD-III/KCED-I/CPWD/ Kolkata</u>
2(viii)	Accepting Authority	<u>AE (E)/KCESD-III/KCED-I/CPWD/ Kolkata</u>
2(x)	Percentage on cost of materials and Labour to cover all overheads and profits:	15%
2(xi)	Standard Schedule of Rates	<u>DSR' 2025 & MR</u>
2(xii)	Department	<u>CPWD</u>
9(ii)	Standard CPWD Contract Form GCC 2023,	<u>CPWD Form 7/8 modified & Corrected upto date .</u>

Clause 1

- (i) Time allowed for submission of Performance Guarantee from the date of issue of letter of acceptance **7 (Seven) Days**
- (ii) Maximum allowable extension with late fee @ 0.1% per day of performance guarantee amount the period provided in (i) above (1 to 15 days to be filled by NIT approving authority) **3 (Three) Days**

Clause 2

Authority for fixing compensation under clause 2 **CE /Kolkata Region /CPWD/Kolkata**

Clause 2A

Whether Clause 2A shall be applicable **Yes**

Clause 5

Number of days from the date of issue of letter of acceptance for reckoning date of start **10 (Ten) Days**

Milestone(s) as per table given below:-

S. No.	Description of Milestone (Physical)	Time allowed in days (from date of start)	Amount to be with-held in case of non achievement of milestone

PROFORMA OF SCHEDULES**CPWD**

Time allowed for execution of work

01 (One) Month**Authority to decide:**

- (i) Extension of time **AE (E)/KCESD-III/KCED-I/CPWD/ Kolkata**. (EngineerinChargeorEngineerinChargeof Major ComponentincaseofCompositeContracts, as thecase maybe)

Clause7

Gross work to be done to get herewith net payment /adjustment of advances form arterial collected, if any, since the last such payment for being eligible to interim payment

As Applicable**Clause 7A**

No Running Account Bill shall be paid for the work till the applicable labour licenses, registration with EPFO, ESIC and BOCW Welfare Board, whatever applicable are submitted by the contractor to the Engineer-in-charge. **Whether Clause 7A shall be applicable: YES/ NO**

Clause 10A**List of testing equipment to be provided by the contractor at site lab.**

1. Megger 2. EARTH TESTER3.Multimeter
4..... 5. 6.....

Clause10B(ii)

WhetherClause10 B(ii)shallbe applicable

Yes/No**Clause10C**

Componentof labourepressedaspercentof valueofwork=

Not Applicable**Clause10CA**

S. No.	Materialcovered underthisclause	Nearest Materials(otherthancement,reinforce ment bars andthestructuralsteel)forwhich All India WholesalePrice Index tobefollowed	Base Price of all Materials covered under clause10 CA
1		NIL	
2			
3			

* Base price of all the materials covered under clause 10 CA is to be mentioned at the time of approval of NIT.

PROFORMA OF SCHEDULES	CPWD
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Clause10CC

Not Applicable

Clause10 CC to be applicable in contracts with stipulated period of completion exceeding the period shown in next column	12 (Twenty) Months
~~Schedule of component of other Materials, Labour, POL etc. for prices collation. –~~	~~Nil~~
~~Component of civil (except materials covered under clause 10CA) /Electrical construction Materials expressed as percent of total value of work~~	~~Xm %~~
~~Component of Labour– Expressed as percent of total value of work.~~	~~Y %~~
~~Component of P.O.L.– Expressed as percent of total value of work.~~	~~Z %~~

Deleted

Clause11

Specifications to be followed
For execution of work

As per CPWD General Specification for Electrical Works
Part –I (Internal), Part-II (External)

Clause12 Type of work **Maintenance work**

***To be filled by NIT approving authority either Project and Original work or Maintenance works

Including works of up-gradation, aesthetic, special, repair, additional /alteration in buildings.

The items related to road work like up-gradation / improvement of footpath & central verge, improvement of carriage way by patch repair or annual / periodical repairs of road surface and A/R & M/O works pertaining to road shall be treat as maintenance work.

New road construction works and the strengthening of road surface shall be considered as original works.

12.2.&12.3 Deviation limit beyond which clauses 12.2 & 12.3 shall apply for building work **No Limit**

12.5 (i) Deviation Limit beyond which clauses 12.2&12.3shallapplyforfoundation work (Except earth work) **N.A.**
(ii) Deviation limit for items in earth work subhead of DSR or related item – 100% **N.A**
(Modified vide OM DG / CON / 272, Dt. 21/08/2013)

Clause16

Competent Authority for
Deciding reduced rates.

CE /Kolkata Region /CPWD/Kolkata

Clause18

List of mandatory machinery, tools & plants to be deployed by the contractor at site:-

As required for timely execution of work as per direction of Engineer –in – charge.

Clause 25

Constitution of Dispute Redressal Committee (DRC)	Competent Authority to appoint DRC
DRC shall constitute one Chairman and two members	Chief Engineer or Additional Director General if there is no Chief Engineer

PROFORMA OF SCHEDULES**CPWD****Clause 30(i)****Requirement of Technical Representative(s) and recovery Rate**

Sl. No	Minimum Qualification of Technical representative	Discipline	Designation (Principal Technical/ Technical representative)	Minimum experience	Nos.	Rate at which recovery shall be made from the contractor in the event of not fulfilling provision of Clause 36(i)	
						Figures	Words
1.	Graduate Engineer or Diploma Engineer	Elect./Mech	Technical representative	2 years Or 5 years	1(one) nos. or 1(one) nos.	Rs. 15000/- Per month	Rupees Fifteen thousand per month

Assistant Engineers retired from Government services that are holding Diploma will be treated at par with Graduate Engineers.

Diploma holder with minimum 10 year relevant experience with a reputed construction co. can be treated at par with Graduate Engineers for the purpose of such deployment subject to the condition that such diploma holders should not exceed 50% of requirement of degree engineers.

Clause 42

- i) (a) Schedule/statement for determining theoretical quantity of cement and bitumen on the basis of Delhi schedule of Rates 2014 printed by C.P.W.D. and read along with Additional specifications attached with NIT.

3474 Variations permissible on theoretical quantities

- a) Cement
For works with estimated cost put to tender not more than Rs.5 lakhs. For works with estimated cost put to tender more than Rs.5 lakhs. **NA**
- b) Bitumen for all works. **NA**
- c) Steel Reinforcement and structural steel section for each diameter, section and Category. **NA**
- d) All other materials **NIL**

RECOVERY RATES FOR QUANTITIES BEYOND PERMISSIBLE VARIATION

Sl No	Description of item	Rates in figures and words at which recovery Shall be made from the Contractor. Base Price in schedule 'F' plus 10%	
		Excess beyond Permissible variation	Less use beyond the permissible variation

केन्द्रीय लोक निर्माण विभाग
कार्यालय ज्ञापन

No. DG/Manual 2022/Misc/13

ISSUED BY THE AUTHORITY OF DIRECTOR GENERAL, CPWD

Nirman Bhawan, New Delhi

Dated: 25.04.2023

Subject: Guidelines for implementation of e-MB.

In compliance to OM no. 135 of 2023 dated 21.03.2023 of ERP unit, online measurements of work done are to be recorded for payment of works being executed by CPWD. The ERP system of e-measurement shall be adopted in first phase for works at the stations Delhi, Mumbai, Chennai, Kolkata, Chandigarh and Bengaluru. Necessary modifications in Manual / SOP has been done vide OM Nos DG/Manual/2022/07 and DG/SOP/2022/13. However following procedure shall be adopted for use of e-MB in on-going works:

1. For the on-going agreements, the computerised measurement book (c-MB)/computerized level book (c-LB) system is already adopted in the agreements. The ERP system of e-measurement shall also be adopted for on-going agreement with the consent of the contractor. A consent letter shall be taken from the contractor by the Engineer-in-Charge in the format attached with this OM. This consent letter shall become part of the agreement. This exercise should be completed within 15 days of issue of this OM.
2. If any agency does not agree to give consent, letter shall be issued to the agency to give the reason for not giving the consent.
3. If the agency fails to give the consent, even after issue of letter, then system of c-MB / c-LB may be continued.

This issues with the approval of DG CPWD.

Encl: As above.


25.04.2023
(वी. पी. साहू)

अधीक्षण अभियंता (सी.एंड एम.)

Issued from file No. CSQ/CM/16(1)/2023 e- file 9155028

केलोनवि तथा लोनवि दिल्ली के सभी अधिकारियों को आवश्यक सूचना एवं कार्यवाही हेतु।
(केलोनवि वेबसाईट के माध्यम से)


25.04.2023
R K SINGH
EE(Manual)

Sample consent letter of contractor for e-MB

To
The Assistant Engineer(E)
KCESD-III/KCED-I/CPWD
Nizam Palace/Kolkata-20

Subject: Consent for online recording of measurement and making payment on the basis of online measurements submitted through CPWD ERP system.

Name of work: RMO of E & M services installed at Data Centre NIC at 7th Floor, 1st MSO Building, Nizam Palace, Kolkata during 2026-27 (SH: Provision of electrical power connection, LAN and service connection at NIC).

Agreement No.

Sir,

With reference to the above cited work and agreement, I hereby submit my consent for recording of online measurement on CPWD ERP system and making payment of work done on the basis of online submission of measurements on CPWD ERP system.

Yours faithfully,

Dated:
Place:

(Signature of Contractor/authorized representative)
Name & Seal

REFERENCE TO APPLICABLE OFFICE MEMORANDUMS

The following amendments to General Conditions of Contract 2010/ 2014 issued by DG, CPWD, New Delhi shall be applicable and shall form part of the contract / agreement. The Oms can be viewed on website www.cpwd.gov.in

SL	Reference to Oms
1	SOP No. 5/20(8): ERP Electronic Measurement Book (e-MB) (Refer para 5.12.1(B)) Electronic Measurement Book is applicable allover India w.e.f. 01.10.2023 for all ongoing and future works (excluding EPC Projects). (Ref. No. DG/SOP 2022/16, dated. 13-09-2023)
2	Modification/addition in SOP 5/33 for CPWD Works manual 2022 regarding Clause -12 Extra and Deviated items in Works Ref. DG/SOP-2022/24, dated. 18-12-2023
3	Modifications in Condition of Contract, Clause 5 and schedule F in clause 5 of GCC 2023 Maintenance Works (Ref: DG/CON/Maintenance 2023/02 dated. 08-12-23)
4	Modifications in Condition of Contract, Clause 5 and schedule F in clause 5 of GCC 2023 Construction Works (Ref: DG/CON/Construction 2023/04 dated. 08-12-23)
5	Modifications in Condition of Contract, Clause 12 and Schedule E and F of GCC 2023 for Maintenance Works (Ref: DG/CON/Maint 2023/3 dated. 18-12-23)
6	Modifications in Condition of Contract and Clause 19 of GCC 2023 for Maintenance Works & Construction work (Ref: DG/CON/Maint 2023/4 and DG/CON/Construction 2023/5 dated. 08-02-24)
7	Modifications in Clause 7 of GCC 2023 for Maintenance Works & Construction work (Ref: DG/CON/Maintenance 2023/5 dated. 01-03-24 & DG/CON/Construction 2023/7 dated. 01-03-24)
8	Modifications in Condition of Contract, Clause 19 and 20 of GCC 2023 for Maintenance/construction Works (Ref: DG/CON/Maintenance 2023/5 & DG/CON/Construction 2023/7 dated. 01-03-24)
9	Modifications in Clause 7 of GCC 2023 for Construction Works (Ref: DG/CON/Construction 2023/7 dated. 01-03-24)
10	Modification in clause 19 of GCC 2023 for Construction Works (Ref: DG/CON/Construction 2023/8 dated. 05-03-24) for Maintenance Works (Ref: DG/CON/Maintenance 2023/7 dated. 05-03-24)
11	Modifications in Clause 1, 8 and 41 of GCC 2023 for Construction Works (Ref: DG/CON/Construction 2023/9 dated. 01-06-24)
12	Modifications in Clause 36 of GCC 2023 for Maintenance Works (Ref No. DG/CON/Maintenance 2023/08, and for construction work DG/CON/Construction 2023/10 dated. 03-06-24)
13	In GCC 2023 modification/addition regarding General rules and directions (Ref. no. DG/CON/Maintenance 2023/09, And DG/CON/Construction 2023/11 dated. 03-06-24)
14	In GCC 2023 modification/addition regarding General rules and directions (Ref no. DG/CON/Maintenance 2023/11, Dated-29-10-24 and DG/CON/Construction- 2023/13 dated. 29-10-24)
15	In GCC 2023 modification/addition regarding General rules and directions (Ref no. DG/CON/Maintenance 2023/12, Dated-03-1-25 and DG/CON/Construction- 2023/14 dated. 03-1-25)
16	In GCC 2023 modification/addition regarding General rules and directions (Ref no. DG/CON/Maintenance 2023/13, Dated-31-1-25 and DG/CON/Construction- 2023/15 dated. 31-01-25) (Reg. Clause 7A)
17	In GCC 2023 modification/addition regarding General rules and directions (Ref no. DG/CON/Maintenance 2023/14, Dated-10-2-25 and DG/CON/Construction- 2023/16 dated. 10-2-25) (Reg. Clause 7, 8, 9)
18	In GCC 2023 modification/addition regarding General rules and directions (Ref no. DG/CON/Maintenance 2023/15, Dated-03-03-25 and DG/CON/Construction- 2023/17 dated. 03-03-25) (Reg. Clause 14)
19	In GCC 2023 modification/addition regarding General rules and directions (Ref no. DG/CON/Maintenance 2023/16, Dated-16-06-25 and DG/CON/Construction- 2023/18 dated. 16-06-25) (Reg. Clause 25.2, 25.6)
20	In GCC 2023 modification/addition regarding General rules and directions (Ref no. DG/CON/Maintenance 2023/17, Dated-06-11-25 and DG/CON/Construction- 2023/19 dated. 06-11-25) (Reg. Clause 19L)
21	In GCC 2023 modification/addition regarding General rules and directions (Ref no. DG/CON/Maintenance 2023/18, Dated-27-02-26 and DG/CON/Construction- 2023/20 dated. 27-02-26 (Reg. Clause 1)

FORM OF PERFORMANCE SECURITY (GUARANTEE)

BANK GUARANTEE BOND

3474 In consideration of the President of India (hereinafter called “the Government”) having offered to accept the terms and conditions of the proposed agreement between.....and..... (hereinafter called “the said contractor(s)”) for the work (hereinafter called “the said agreement”) having agreed, to production of an irrevocable Bank Guarantee for Rs..... (Rupees.....only) as a security/ guarantee from the contractor(s) for compliance of his obligations in accordance with the terms and conditions in the said agreement.

We(hereinafter referred to as “as Bank”)
(indicate the name of Bank)

hereby undertake to pay to the Government an amount not exceeding Rs..... Rupees.....only) on demand by the Government.

3474 We do hereby
(indicate the name of Bank)

undertake to pay the amounts due and payable under this Guarantee without any demure, merely on a demand from the Government stating that the amount claimed is required to meet the recoveries due or likely to be due from the said contractor (s). Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the bank under this Guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs.....(Rupees.....only)

3474 We, the said bank further undertake to pay the Government any money so demand notwithstanding any dispute or disputes raised by the contractor(s) in any suit or proceeding pending before any court or Tribunal relating thereto, our liability under this present being absolute and unequivocal.

The payment so made by us under this bond shall be a valid discharge of our liability for payment there under and the contractor(s) shall have no claim against us for making such payment.

3474 We further agree that the
(indicate the name of the Bank)

guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said agreement and that it shall continue to be enforceable till all the dues of the Government under or by virtue of the said Agreement have been fully paid and its claim satisfied or discharged or till Engineer-in-Charge on behalf of the Government certifies that the terms and conditions of the said Agreement have been fully and properly carried out by the said contractor(s) accordingly discharges this guarantee.

3474 We..... further agree with

(indicate the name of Bank)

the Government that the Government shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said Agreement or to extend time of performance by the said contractor(s) from time to time or to postpone for any time or from time to time any of the powers exercisable by the Government against the said contractor(s) and to forebear or enforce any of the terms and conditions relating to the said agreement and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said contractor(s) or for any forbearance, act of omission on the part of the Government or any indulgence by the Government to the said contractor(s) or by any such matter or thing whatsoever which under the law relating to sureties would, but for this provision, have effect of so relieving us.

6. This guarantee will not be discharged due to the change in the constitution of the Bank or the contractor(s).

7. We lastly undertake not

(indicate the name of bank)

to revoke this guarantee except with the previous consent of the Government in writing.

8. This guarantee shall be valid up to.....unless extended on demand by Government. Notwithstanding anything mentioned above, our liability against this Guarantee is restricted to Rs.(Rupees.....only) and unless a claim in writing is lodged with us within six months of the date of expiry or the extended date of expiry of this guarantee, all our liabilities under this guarantee, shall stand discharged.

**Dated, the Day
of.....**

For.....

(indicate the name of the Bank).

ADDITIONAL CONDITIONS OF CONTRACT AND SPECIFICATIONS FOR E & M WORKS

1.0 GENERAL AND COMMERCIAL CONDITIONS:

- 1.2 This section covers the various commercial conditions applicable and to be read in connection with the conditions of contract of the standard form (CPWD-7 / 8) of the department (CPWD) forming part of the tender papers. In the event of any discrepancy between these two, the requirements of the former will be followed.
- 1.3 These additional conditions and additional specifications are applicable to all E&M works in general. For specific tenders some of the E&M services may not be a part of the particular tender. In such cases the conditions and specifications which are not related to the works or components thereof mentioned in the schedule of work shall not apply for that particular tender.
- 1.4 All the E & M works shall be carried out as per direction and to the entire satisfaction of the Engineer-in-charge.
- 1.5 The contractor has to be submitted all the drawings to the Engineer – in – charge of the works for approval from the competent authority i.e. HT panel, MV panel, AMF panel, Pole & Pole Bracket for Street light, All other panels & Layout drawing of all works before execution or procurement of materials. Unless otherwise specified in the following conditions, the work shall, in general, be carried out as per following specifications:
 - a) CPWD General Specifications for Electrical Works – Part-I (Internal), 2023 amended up to date.
 - b) CPWD General Specifications for Electrical Works – Part-II (External), 2023 amended up to date.
 - c) CPWD General Specifications for Electrical Works, Part – IV, Substation 2013 amended up to date.
 - d) CPWD General Specification of HVAC Works 2024 amended up to date.
 - e) Relevant BIS specifications amended up to date.
 - f) Indian Electricity Act 2003 and Indian Electricity Rules 1956 amended up to date.
 - g) Local Fire Regulations applicable at the place of installation.
 - h) Relevant and applicable foreign standards and specifications amended up to date.
 - i) Any other relevant act or rules and local byelaws.
 - j) Commercial and additional conditions and specifications for E & M work for this tender.
- 1.5 If the specifications for any item or its component are not available in the CPWD specifications cited above, relevant BIS specification as amended up to date shall be followed, whether or not the specific reference of a particular BIS specification has been made in this specification / tender document.
- 1.6 Wherever any reference to any Indian Standard specification occurs in the document relating to this contract the same shall be inclusive of all amendments issued thereto or revisions thereof, if any, up to the date of opening of tenders.
- 1.7 All materials should conform to relevant BIS specifications wherever the same exists in absence of stipulation in this tender document.
- 1.8 Where manufacturers furnishes specific instructions / recommendations relating to the materials used in this job and/or their installation, covering points not specifically mentioned in these documents, these instructions shall be followed in all cases and shall be deemed to be included in the schedule of work whether they have been specifically mentioned or not.
- 1.9 Manufacturer's catalogue / literature on installation, testing, maintenance and troubleshooting of major equipment shall be submitted to the department while handing over the installation.
- 1.10 MATERIALS TO BE USED IN THE WORK :
 - 1.10.1 All materials used in the work shall be new and of good quality, conforming to the relevant specifications as per good Engineering practice.
 - 1.10.2 All the materials proposed to be used in the work should be got approved from Engineer in Charge before use in work.

- 1.10.3 The materials to be supplied / provided by the contractor in execution of the work should be ISI marked, wherever applicable and of make as specified in the agreement. Where the make of any particular material is not specified in the contract document, the material shall be supplied as per makes desired by the Engineer-in-charge.
- 1.10.4 It will be the responsibility of the contractor / bidder to ensure use of genuine materials in the work. The department reserves the right to get (any / all materials / components) inspected by the manufacturer or their authorized representatives at any stage of the execution of work. If any of the materials, equipment supplied and used in work is found spurious at any stage, then the department reserves the right to ask the contractor to replace it by genuine one and make suitable recovery and / or withheld suitable amount till it is done, even if any payment against that material is already made.
- 1.10.5 The department may ask for any valid document like manufacturer's test certificate, document for purchase of the material, document for import / shipment of imported materials etc. as deemed fit by the engineer-in-charge to ascertain genuineness of material supplied by / used in the work by the contractor. The contractor shall remain bound to submit all such documents to the department failing which payment may not be made or if already paid may be recovered / withheld from subsequent running account payment.
- 1.10.6 Copies of all purchase documents for all equipment, accessories, fittings, fixtures etc. which carry guarantee / warranty shall be handed over to the department in suitable form so that proper guarantee of materials are available to the department.
- 1.10.7 All the equipment and their components and all the materials to be used in the work shall be suitable for the environmental conditions at the location of the work.
- 1.10.8 The materials to be supplied in this work shall be scheduled in such a way that milestones are achieved and no shortfall is there. At the same time materials should be brought at site in phases in such a manner so that they are not brought much in advance at site and dumped in work site for long period before installation and guarantee / warranty of the materials are available for full period i.e. from the date of beneficial use of the material / equipment as per tender conditions. If the materials / equipment are supplied at site much before actual use in work, the department shall not remain bound to accept and make payment for such items of work involving the said materials / equipment. The decision of the engineer in charge will be final and binding on all.
- 1.10.9 Dismantle materials, if any, should be returned to the department unless otherwise anything in contrary has been specifically stated in the tender document / BOQ.
- 1.11 **RATES :**
- 1.11.1 Unless otherwise provided in the schedule of quantities of the work the rates tendered by the contractor shall be all inclusive and shall apply to all heights, lifts, leads and depths of the building and nothing extra shall be payable to him on this account.
- 1.11.2 The rates for all items of work shall, unless clearly specified otherwise, include cost of all labours, materials and other inputs involved in the execution of the item irrespective of whether they have been specifically mentioned in the tender document or not.
- 1.11.3 This being an indivisible works contract, Sales Tax, Excise Duty etc. are not payable separately. The rates tendered shall be firm and inclusive of all taxes, duties, cess and levies as applicable (except service tax), and all charges for packing, forwarding, insurance, freight and delivery, installation, testing and commissioning at site, watch and ward etc. including temporary constructional storage, risks, overhead charges, general liabilities / obligations and clearance from local bodies and State Fire Services, as applicable. Nothing extra shall be paid. However, fees payable to the local bodies / authorities for such clearance etc. shall be borne by the department.
- 1.11.4 Octroi exemption certificate may be issued by the department if required by the contractor. However, the department is not liable to reimburse the octroi duty in case exemption certificates are not honoured by the concerned authorities.
- 1.11.5 The rates quoted by the tenderer, shall be firm and inclusive of all taxes (including works contract tax but excluding service tax), octroi, duties and levies and all charges for packing forwarding, insurance, freight and delivery, installation, testing, commissioning etc. at site i/c temporary constructional storage, risks, overhead charges, general liabilities/obligations and clearance from local authorities.

- 1.11.6 If any Extra items/ Deviation items (beyond permissible limit) executed by the agency before approval from the competent authority, the executing agency shall submit the tax invoice, Vouchers etc. along with the rate analysis as per the provision of Clause 12.2 & 12.3 of GCC-2023 for Original Construction work as modified & corrected up to last date of submission of tender.**

1.12.1 COMPLETENESS OF TENDER:

All sundry equipment, fittings, unit assemblies, accessories, hardware items, foundation bolts, termination lugs for electrical connections, and all other items which are useful and necessary for efficient assembly and installation of equipment and components of the work shall be deemed to have been included in the tender irrespective of the fact whether such items are specifically mentioned in the tender documents or not.

1.12.2 STORAGE AND CUSTODY OF MATERIALS:

The agency has to make his own arrangement for watch and ward of the stores. Their safe custody shall be the responsibility of the contractor till the final taking over of the installation by the department.

1.13 ACCIDENT:

The department (CPWD) shall not have any responsibility or liability in case of any accident injury to the personnel to the contractor at work site or to the general public at the work site due to mishandling of equipment by the personnel of the contractor or any other similar reason. The responsibilities and liabilities for such accidents and incidents shall be borne in full by the contractor.

1.14 AFTER SALES SERVICE :

The contractor shall ensure adequate and prompt after sales service in the form of maintenance personnel and spares as and when required with a view to minimize the break down period. Particular attention shall be given to ensure that all spares are easily available during the normal life of the installation.

1.15 REMOVAL OF SURPLUS MATERIALS AND TOOLS :

After completion of work the agency shall remove his men, materials and debris etc. from site.

1.16 QUALITY OF WORK AND WORKMANSHIP :

- 1.16.1** The contractor shall be entirely responsible and answerable for all the works done by him regarding quality, adherence to the laid down specifications, 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.

- 1.16.2** Clause 1.15 of CPWD General Specifications for Electrical Works, Part – IV, Substation 2013 shall be applicable.

- 1.16.3** The materials having ISI mark shall have precedence over the one conforming to IS Specifications.

- 1.16.4** The contractor is advised to visit the site before quoting for his tender to apprise himself about the site environments and other conditions. Drawings and inventories can be seen in the office of the Engineer – in – charge.

1.17 SITE ORDER BOOK :

The contractor or his authorized representative shall sign the site order book and comply with the remarks entered therein by the representative of the department.

1.18 WATCH AND WARD :

- 1.18.1 The contractor will make his own storage of his own materials. The watch and ward of the materials and of the installations would be responsibility of contractor till the work is completed / handed over to the department. Nothing extra shall be paid to the contractor on this account.
- 1.18.2 Making payment to the contractor in any form against supply of materials / equipment / components or execution thereof shall not absolve the contractor of his responsibility of watch and ward of the equipment / materials etc. and their satisfactory functioning until the same is taken over by the department after successful installation, testing, commissioning and running in period.
- 1.18.3 No separate storage space will be provided to the contractor for storage of his materials and equipment to be brought at site and used in execution. The available open site space may however be used by the contractor for storage purposes in which case he may build up temporary store at available site space at his own cost.

1.19 VARIATION IN QUANTITY:

- 1.19.1 Quantities shown against each item of work or supply are tentative which may vary on either side (plus or minus). This variation shall, in general, be governed by clause no. 12 of the clauses of contract of CPWD form 7 / 8. The contractor should ensure from the Engineer-in-charge and from the site condition the actual quantity required / to be used / to be supplied before bringing the materials at site. In case the actual quantity of material required at the site is less than the stipulated quantity, the contractor cannot claim to supply entire quantity stipulated in the schedule of quantities of work (Schedule – A) as well as cannot demand for payment thereof. The contractor shall therefore, be very careful about the quantity of materials to be supplied / brought at site. The decision of the Engineer-in-charge in this regard shall be final and binding on the part of the contractor. Even if initial payment for supply of materials is made in any form for bringing material at site and if it is found at later stage that the actual requirement is less as per site requirement or as per decision of the Engineer-in-charge, the contractor shall have to take back the additional quantity brought / supplied at site and necessary adjustment shall be made from his next bill on this account. No claim in this regard shall be entertained.

1.20 NATURAL CALAMITY:

- 1.20.1 No payment will be made to the contractor for any damage caused by rain, snow fall, floods, dampness, fire, sun or any other natural cause whatsoever during the execution of work. The damage to the work due to above reason, if any, shall have to be made good by the contractor at his own cost and no claim on this account shall be entertained.

1.21 INSPECTION AND TESTING :

- 1.21.1 The Engineer-in-charge or his authorized representative may inspect any material at manufacturers' works and may witness routine tests as per relevant Indian Standard Specifications or other relevant specifications at manufacturers' works.
- 1.21.2 The contractor shall give in writing advance notice to the Engineer-in-charge and arrange for such inspection / presence for testing at manufacturers work. The TA/DA etc. of the departmental personnel who will be deputed to witness the tests etc. shall be borne by the Department.
- 1.21.3 The Engineer-in-charge or his authorized representatives shall have, at all the reasonable times, access to the contractors premises or works or other works where manufacturing / fabrication shall be done and shall have the power, at all reasonable times, to inspect and examine the materials and workmanship during its manufacture or fabrication.
- 1.21.4 Inspection of imported materials at foreign works shall however not be carried out by the department. These materials shall be inspected and tested at site. Manufacturers' original test certificates and document of import / shipment should be provided to the department along with the materials without which no payment should be made to the contractor.
- 1.21.5 The contractor shall arrange for all the materials and labour required in connection with inspection of equipment or for any testing to be carried out at his works / manufacturers' works or at site of installation. Notice of such inspection / presence for testing shall be given by the contractor to the Engineer-in-charge at least fifteen days in advance.

- 1.21.6 Notwithstanding approval for such tests / inspection of equipment / components by the Engineer-in-charge or his authorized representative, the contractor shall be required to perform site tests as desired by the Engineer-in-charge and prove the correctness of ratings and performance of equipment / components and materials supplied and / or installed by him as per contract specifications and conditions at his own cost.
 - 1.21.7 The Engineer-in-charge reserves the right to reject any equipment / machinery / material should it, on tests after installation, be found not to comply with contract specifications or its performance is not satisfactory.
 - 1.21.8 Final inspection and testing will be done by the Engineer-in-charge or his authorize representative as per details to be indicated by the Engineer-in-charge.
 - 1.21.9 It shall be the responsibility of the contractor to get the installation inspected and passed by the local authorities concerned, as may be required by the local bye laws. The contractor will extend all help including test facilities to the representatives of the local bodies. In case the contractor fails to make desired facilities available during inspection, the department reserves the right to provide the same at the risk and cost of the contractor. The observation of the local authorities will be promptly attended by the contractor. The installation will be accepted by the department only after receiving clearance from the local bodies / fire authorities. The inspection charges live able by the local / statutory authorities for the inspection shall however, be borne by the department.
- 1.22 COMPLETION DRAWING AND MANUAL :
- 1.22.1 In addition to the mode and form of submission of completion drawings and manuals as stipulated in the relevant CPWD Specifications for various sub-heads of E&M works, the contractor shall also submit soft copy of the completion drawings.
- 1.23 POWER SUPPLY AND WATER SUPPLY :
- 1.23.1 No Power & Water Supply shall be provided by the department for the purpose of execution of the E&M work, except for testing and commissioning of installations. The contractor shall make his own arrangement in this regards. The power supply for testing and commissioning will be given at one point inside the premises and the contractor shall have to make arrangement for required cabling work and switch gears for extension of the power to the required location for testing. This will be applicable to all sub-heads of E&M works.
- 1.24 WORKS TO BE DONE BY THE CONTRACTOR
- 1.24.1 Unless 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 – whether specifically indicated in the schedule of quantity / work or not:
 - 1.24.2 Preparation of all layout, working drawings for execution of the work (E&M) components and submission to the Engineer-in-charge for approval to be done by the agency within 15 days from the scheduled date of commencement of the work.
 - 1.24.3 Foundations for equipment / structures / pumps including vibration isolation spring / pads.
 - 1.24.4 All minor building works necessary for installation of equipment such as making of openings in walls / floors, either of RCC or brick masonry, foundation trench for fuel line and cable, making of opening in walls or in floors and restoring them to their original condition / finish and necessary grouting etc. as required.
 - 1.24.5 Dismantling of brick wall, if any, for inserting / positioning / placement of equipment, Control panel / Diesel Tanks or for taking ducting / cable tray / pipes and rebuilding / making good the same to its original position / finish for the same nothing extra shall be paid by the department.
 - 1.24.6 Making good all damages caused to the structure during installation and restoring the same to their original finish.
 - 1.24.7 Supply and installation of all necessary angle / channel / flat iron supports and brackets etc. for installation of the Cabling / electric Panels / pumps / accessories on floor / wall / Shaft / terrace and at other places, as may be necessary including their installations in position.
 - 1.24.8 Responsibility to ensure safety of all materials against pilferage and damage till the installation is handed over to the department.

- 1.24.9 All scaffolding as may be necessary for installation of Exhaust piping / Cabling / Electric Panels /Lightning arrestor/ exhaust pipe / wet riser and sprinkler pipes / ducts and all other equipment and their sub-assemblies / accessories on floor / wall / Shaft / terrace and at other places during erection work and subsequent removal.
- 1.24.10 Painting of all exposed metal surfaces of equipment's and components with appropriate /approved colour as required and as desired by the Engineer – in - charge.
- 1.24.11 All electrical works including cables / wires, earthing etc. to be done as specified in Schedule of work.
- 1.24.12 Small wiring, inter-connection etc. inclusive of all materials and accessories necessary to comply with the regulations as well as proper and trouble free operation of the equipment.
- 1.24.13 Closing of the cable entry points in sub-station against seepage of water rodents etc.
- 1.24.14 Approval / clearance of the complete installation shall be obtained by the contractor from CPCB / State Pollution Control Board / Local Bodies / Central Electricity Authority (CEA) / other licensing authorities wherever required. However application shall be made by the Department and any statutory fee, as applicable, shall be paid by the department directly to the government authorities concerned.
- 1.25 Date of taking over of the installation and date of acceptance :
- 1.25.1 The date of taking over of the installations under any sub-head of E&M works shall be the date of taking over the complete building (s) after due completion of the entire composite work and after complete test and trial run of all the major equipment under all sub-heads of E&M works to the entire satisfaction of the engineer-in-charge.
- 1.25.2 Subject to the guarantee clause, date of taking over the installation after stipulated period of trouble free operation of all the E&M works shall be the date of acceptance.
- 1.25.3 The appointment of Arbitrator shall be governed by the relevant clause of CPWD General Condition of Contract. The condition of contracts shall be governed by GCC, CPWD.
- 1.26.1 ~~“Supply, installation, testing and commissioning of “CCTV and Allied Equipments” composite contractor/associate agency to fulfil the following eligibility criteria:~~
- (i) ~~Three similar completed works costing each of value not less than Rs. 2.73 Lakh of estimated cost put to the tender. OR~~
- (ii) ~~Two similar completed works costing each of value not less than Rs. 4.10 Lakh of estimated cost put to the tender. OR~~
- (iii) ~~One similar completed work costing each of value not less than Rs. 5.46 Lakh of estimated cost put to the tender.~~

NOTE:- The similar work should be executed in last 07 Seven year ending previous day of last date of submission of bid. The value of executed works shall be brought to current costing level by enhancing the value of work at simple rate of 7% per annum; calculated from the date of completion to last date of receipt of application for bids. The experience certificates duly attested shall be furnished to engineer-in-charge and only after approval of agency, the firm shall be deployed by main contractor for execution of work. The contractor has to arrange facilities for inspection of equipment's/ materials including conducting the required tests in the manufacturing unit. However no condition is incorporated in the NIT regarding inspection of equipment's/ materials in the manufacturing unit located outside India without prior permission of Ministry of HAUA

2.1 ADDITIONAL CONDITIONS FOR INTERNAL EI ELECTRICAL WORKS:

- 2.2 The Department shall not issue any T & P and nothing extra shall be paid on account of this.
- 2.3 The main contractor should engage an eligible agency having valid registration in CPWD in appropriate class under category internal & external electrical installations / appropriate class under composite category for execution of electrification work. The firm should possess valid electrical contractor license. In case the main contractor himself meets the above criteria, he shall be allowed to execute this sub-head of work after due verification by the Engineer-in-Charge of Electrical Works

- 2.4 The firm shall be issued tender on production of valid electrical license from competent authority in the name of the contractor. However, the contractors shall be 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. In case of association of electrical contractor, the main contractor has to enter in agreement with the contractor associated and copy of such agreement shall be submitted to Executive Engineer in charge of E&M component. In case the main contractor intends to change the associated contractor during operation of the contract, he shall obtain prior approval of respective Engineer in charge. The new agency shall have to satisfy the laid down eligibility criteria. In case Engineer in charge of respective discipline is not satisfied with the performance of the agency, he can direct the main contractor to change the agency associated for execution of minor component and this shall be binding on the main contractor.
- 2.5 Care shall be taken by the contractor while handling and installing the various equipment and components of the work to avoid damage to the building. 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 cost all unwanted and waste materials arising out of the installation from the site of work.
- 2.6 The tenderer shall guarantee among other things, the following vis-à-vis specifications.
- a) Quality, strength and performance of the materials used.
- b) Satisfactory operation during the maintenance period.
- 2.6 DEFECT LIABILITY PERIOD:
- a) The entire installation in general shall be guaranteed for a period of 12 months from the date of completion. Any defective materials and equipment shall be replaced free of cost at the direction of the Engineer-in-Charge.
- b) All the LED bulbs/ LED Fittings shall be guaranteed for a period of 5 years from the date of completion of work and handing over. A letter from the manufacturer of the LED luminaries regarding the back to back arrangement for performance of this guarantee clause shall be submitted at the time of supply of LED fittings.
- b/i) 50% of the performance guarantee shall be refunded to the contractor soon after the completion of the work and recording of the completion certificate.
- b/ii) 50% of the Performance Guarantee shall be retained as Security Deposit.
- b/iii) 50% of the Performance Guarantee retained as Security Deposit plus 2.5% Security Deposit already deducted from each running bill (Total 2.5 + 2.5 =5%) shall be refunded year wise proportionately.

3.0 EXTENT OF WORK:

- 3.1 The work shall comprise of entire labour including supervision and all materials necessary to make a complete installation and such tests and adjustments and commissioning as may be required by the department.
- 3.2 Minor building works necessary like making of opening in walls or in floors and restoring to their original condition, finish and necessary grouting etc. as required to be undertaken.
- 3.3 Maintenance (Routine & preventive) for one year from date of completion and handing over.
- 3.4 Cooperation with other agencies:
The successful tender shall co-ordinate with other contractors and agencies engaged in the construction of the building and exchange freely all technical information so as to make the execution of this works contract smooth. No remuneration should be claimed from the department for such technical cooperation. If any unreasonable hindrance is caused to other agencies and any existing portion of the building has to be dismantled and re-done for want of cooperation and coordination by the successful tenderer during the course of work, such expenditure incurred will be recovered from

the successful tenderer if the restoration work to the original condition or specification of the dismantled portion of the work was not undertaken by the successful tenderer himself. Water proofing of pits shall not be damaged under any circumstances.

3.5 Verification of correctness of material at Destination:

All materials and equipment 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 contractor shall have to produce all the relevant records to certify that the genuine material from the manufacturers has been supplied and erected.

- (a) Materials and equipment to be used in the work shall be inspected by the Departmental officers. Such inspection will be of following categories:
 - (i) Inspection of materials/equipment to be witnessed at the Manufacturer's premises in accordance with relevant BIS/Agreement Inspection Procedure.
 - (ii) To receive materials at site with Manufacturer's Test Certificate(s).
 - (iii) To inspect materials at the Authorized Dealer's Godowns to ensure delivery of genuine materials at site.
- (i) To receive materials after physical inspection at site.
- (b) Similarly, for fabricated equipment, 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.

4.0 **INTERPRETING SPECIFICATIONS / Order of Preference:**

Should there be any difference or discrepancy between the description of items as given in the Schedule of Quantities, technical specifications for individual items of work (including additional and commercial conditions) and IS Codes etc., the following order of preference shall be followed:

- a) Schedule of quantities
- b) Commercial and Additional conditions, technical specifications for this work
- c) General Conditions of Contract for CPWD Works
- d) Drawings (if any approved by the Engineer-in-charge)
- e) CPWD General Specifications for electrical works
- f) Relevant IS or any other International code in case IS code is not available.

4.1 Executive Engineer (Elect.) shall be the Engineer-in-Charge as far as electrical works are concerned. Separate tender form for electrical component is appended with his tender. It will be obligatory on part of the main contractor to sign the tender documents for all the component.

4.2 The main agency shall be responsible for all acts of commissions and non-commissions of the electrical contractor or sub-contractor engaged by him, even with approval of department.

4.3 Approval of the Engineer-in-charge shall be taken well in advance for all the materials to be used in the work by the contractor.

4.4 Running/final bill for Electrical/Mechanical components shall be made/passed by the EE (E) directly to the main Contractor. The main contractor shall make the payment to associated Contractor within 15 days of receipt of each running account payment.

4.5 Payments terms:-On account payments for part work (after stipulated and statutory deductions) as assessed by the Engineer – in-charge for the applicable items in the Contract shall be payable at part rates. The part rates will be decided by the Engineer-In-Charge of the work and shall be binding on the contractor.

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

- 4.7 The Associated electrical Contractor or his representative is bound to sign the site order book as and when required by the Engineer-in-charge and will comply with the remarks therein.
- 4.8 The contractor shall make his own arrangement at his own cost for electrical / General Tools and plants required for the work.
- 4.9 The connections, inter-connections, earthing and inter-earthing shall be done by the contractor wherever required to be done for Energization of the installation and nothing extra shall be paid on this account.
- 4.10 The contractor must be able to work on concrete slabs / walls as and when required and in complete co-ordination with the civil works. Cutting of chases in the plastered wall shall in no case be allowed. The contractor shall fix conduits and boxes in the walls soon after the brick work is completed and finish the chase to rough surface with proper cement sand mixture. Only in exceptional cases e.g. where cutting of plastered surface cannot be avoided it will be contractor's responsibility to ensure that plastering is done to match the original finish at no extra cost.
- 4.11 The contractor shall remove all the debris due to the electrical works from the site as soon as the work is completed
- 4.12 The rupturing capacity of the MCB's shall be 10 KA. The MCB's shall have ISI marked.
- 4.13 All the MCCBs shall be rated for $I_{cs}=100\%I_{cu}$.
- 4.14 The copper wire to be used on this work shall be FRLS type.
- 4.15 Make of MCB/MCCB shall be the same as the make of MCB DB.
- 4.16 The Electrical works shall be carried out by the contractor, side by side with the progress of the civil works.
- 4.17 The Contractor shall on demand by the Engineer-in-charge, furnish the proof to the satisfaction of Engineer-in-charge regarding purchase of Wires, , MCBs, MCBDB, Fittings, accessories and other items, from the manufacturers authorized outlets.
- 4.18 Cutting of brick walls shall be with chase cutting machine only. All repairs and patch works shall be neatly carried out to match the original finish and to the entire satisfaction of the Engineer in Charge.
- 4.19 All the sub main and circuit wiring includes loose wire for connections inside switch boxes and MCB DB s. No payment for these loose wires shall be made. However wires within the cubicle panel will be measured and paid under relevant item of work.
- 4.20 The connection between incoming switch / isolator and bus bar shall be made with suitable size of thimble and cable at no extra cost.
- 4.21 Copper conductor of insulated cables of size 1.5 Sq.mm and above shall be stranded and terminals shall be provided with crimped lugs
- 4.22 All MS pulling box cover should be of phenolic laminated sheet of thickness not less than 3 mm and for which nothing extra shall be paid on the account.
- 4.23 All sub-main shall be terminated in the main board with suitable copper lugs and thimbles for which nothing extra will be paid on this account.
- 4.24 All hardware items such as screws, thimbles, GI wire etc. which are essentially required for completing an item as per specifications will be deemed to be included in the item even when the same have not been specifically mentioned.
- 4.25 All hardware items such as nuts/ bolts/ screws/ washers etc. to be used in work shall be zinc/ cadmium plated iron.
- 4.26 Any conduit which is not be wired by the contractor shall be provided with GI fish wire for wiring by some other agency subsequently. Nothing extra shall be paid for the same.
- 4.27 While laying conduit, suitable size junction boxes shall be provided for pulling the wire as per the decision of the E-in-C.
- 4.28 Materials to be used in work are to be ISI marked wherever applicable. The make of the materials have been indicated in the list of acceptable makes. No other makes will be acceptable. For items for which acceptable makes are not mentioned in the tender document, Engineer-In-Charge shall decide the make before bringing the material to the site by the contractor. The materials to be used in the work shall be got approved by the Engineer in Charge / his representative before its use at site. The E-in-C shall reserve the right to instruct the contractor to remove the material which, in his opinion, is not acceptable.

- 4.29 Quantity of various items as specified in tender document may changes during construction stage as per site condition / clients requirement, the successful bidder is advised to verify the actual requirement of items including fittings, fixtures before bringing the material to the site.
- 4.30 In case the same item(s) appear more than once in the schedule of work / BOQ under the same sub head or among the different subhead of works, the lowest rate quoted for that item (s) shall be considered for the particular item(s) wherever appeared in any part of BOQ/ Schedule of works for the purpose of tender evaluation although web generated e-price bid may incorporate different quoted rate for same item(s) as per the quoting pattern of the tenderer. The tendered amount thus worked out shall be final & shall be binding on the contractor.
- 4.31 All statutory deductions like WCT, Labour welfare cess etc. shall be made from the bills.
- 4.32 Testing: All testes, prescribed in these General Specifications, to be done before, during and after installation, shall be carried out, and the test results shall be submitted to the Engineer-in-charge in prescribed Performa, forming part of the Completion Certificate.
- 4.33 Commissioning on Completion: After Completion of the work, it shall be ensured that the installation is tested and commissioned.
- 5.0 Completion Plan and Completion Certificate:
- (i) For all works completion certificate after completion of work shall be submitted to the Engineer-in-charge.
- (ii) Completion plan drawn to a suitable scale in tracing cloth with ink indicating the following, along with three blue print copies of the same shall also be submitted
- General layout of the building.
 - Locations of main switchboard and distribution boards, indicating the circuit numbers controlled by them.
 - Position of all points and their controls.
 - Types of fittings, viz. fluorescent, T5, LED based, pendants, brackets, bulk head, fans and exhaust fans etc.
 - Name of work, job number, accepted tender reference, actual date of completion, names of Division/Sub-Division, and name of the firm who executed the work with their signature.
- 6.0 The contractor shall submit the completion plan separately in triplicate on blue print with one set on tracing "Cloth" as per the contract within 30 days of the completion of work. In case, the contractor fails to submit the plan, he shall be liable to pay a sum equivalent to 2.5% of the value of the work subject to a ceiling of Rs.25,000.00

7.0 ADDITIONAL SPECIFICATION FOR MV PANEL

- 7.1 These shall in general be as per Section – 4 of CPWD General Specifications for Electrical Works, Part IV, and Substations – 2013. MV Panel Boards: All switch gears / MCCBs / ACBs in any panel board shall be of same make. This will be applicable for all other sub heads of work also. The connection from the switch gears up to the terminal block in cable alley shall be made by aluminium bars of appropriate rating or by PVC insulated single core copper cable of appropriate rating. For connection by cable, duration of cable due to temperature, grouping etc. shall be duly taken into consideration while selecting the size of cable. Proper colour coding shall be maintained.
- 7.1.1 There shall be separate gland plate for each cable entry.
- 7.1.2 The cubicle panels with more than 1000 Amps bus shall be made of tested structural modular sections.
- 7.1.3 All the ACBs and MCCBs in one panel shall be of one make only from amongst the list of preferred makes of materials.
- 7.1.4 All the MCCBs having microprocessor release shall have inbuilt over load, short circuit and earth fault protection. For the MCCBs, Ics shall be equal to 100 % Icu.
- 7.1.5 All the MCCBs having thermal magnetic release shall have inbuilt short circuit and over load protection. There shall also be external earth fault protection if the schedule of work so stipulates.

- 7.1.6 All the three pole MCCBs shall have neutral link as required.
- 7.1.7 Individual door earthing of all the compartments shall be done by suitable size FRLS grade PVC insulated single core copper conductor cable of size not less than 4 Sq. mm.
- 7.1.8 All the panels are to be manufactured / fabricated as per approved drawings, inspections and observations. Noncompliance shall lead to summarily rejection of such item and action shall be taken under relevant terms and condition of the agreement.
- 7.1.9 Successful bidder will be required to provide such facilities as will be necessary for inspection of the panels before dispatch at his or his associated works. There may be stage inspection also. Bidder shall furnish all necessary information for the purpose and will also give sufficient notice regarding the dates proposed for routine and all such tests to the department to facilitate their presence.
- 7.1.10 Inspection of the items of supply shall be done by the Engineer in charge or his authorized representative before they are dispatched to site of work. Copies of inspection certificates issued by CPWD officers shall be attached with dispatch documents to consignee. All arrangements for inspection of the materials at factory shall be made by the bidder and nothing extra shall be paid for the same. However, the cost of to and fro fare of the inspection team of the department shall be borne by the department.
- 7.1.11 Contractor shall arrange, before dispatch of the LT panels, an inspection and certification from the authorized engineer of the manufacturer of the switchgears i.e. ACBs, MCCBs, SDFUs about the genuineness and the same shall be submitted to the engineer-in-charge along with inspection / test report prepared by the inspecting officer authorized by the engineer-in-charge. This will be applicable for all other electrical panels also.
- 7.1.12 The MV panels shall be properly packed before dispatch so as to avoid any damage during transport. If the panels are found to be damaged after they reach at site, the same will be summarily rejected by the department.
- 7.1.13 All the MCCBs shall be provided with front operating kit (lockable rotary handle) irrespective of whether they have been specifically mentioned in the schedule of work or not.
- 7.1.14 All small wiring for controls and indication etc. in the panels shall be of minimum size 1.5 sq. mm size FRLS grade PVC insulated single core copper conductor cables conforming to IS 634. Identification ferrules shall be at both ends of the wires. All control wirings meant for external connection are to be brought out on a terminal board.
- 8.0 The foundation of the poles shall be as per manufacturer's recommendation.
- 9.0 The street light luminaries shall be provided with surge protector of 5 KV or more.
- 10.0 Terms of payments :

The following percentage of contract rates for the various items included in this sub-head of work shall be payable against the stage of work shown herein.

Sl	Stage of work	Feeder Pillar & MV Panel
1	After initial inspection (wherever specified) and delivery at site in good condition on pro-rata basis	70%
2	On completion of pro-rata installation	20%
3	On commissioning completion of successful running in period and taking over of the installation by the department.	10%

11.0 **ADDITIONAL CONDITIONS AND SPECIFICATIONS FOR CABLE AND CABLE LAYING WORK**

- 11.1 The work shall in general be carried out as per CPWD General Specifications for Electrical Works, Part – II, 2023 amended up to date.
- 11.2 When more than one cable are laid in the same trench, the smallest size of the cable shall be considered as main cable and the higher size cables shall be considered as additional cable laying in the same trench. Measurement of cable laying work shall be taken accordingly.
- 11.3 The make of UG cable supplied shall be one from the preferred makes of materials. The MV cables shall have ISI certification mark having valid ISI certification license.
- 11.4 All the UG cables used in this work shall of any one make from the list of preferred makes of materials. Cables of different makes, though from list of preferred makes of materials, shall not be used.
- 11.5 Packing: Strictly in accordance with the provisions as per clause 18.1, 18.2 and 18.2.1 in IS-7098 (Part-I) – 1988 as amended up to date.
- 11.6 Delivery Period: Shortest possible time schedule in delivery is required to be framed / observed, but not later than the specified. The date of actual receipt of materials at site will be considered as the relevant date for this purpose. The delivery schedule shall be as per Table of Mile Stone.
- 11.7 Payment Terms: The following percentage of contract rates for the various items included in this sub-head of work shall be payable against the stage of work shown herein.

Sl	Stage of work	Cable and cable laying work
1	After initial inspection (wherever specified) and delivery at site in good condition on pro-rata basis	70%
2	On completion of pro-rata installation	20%
3	On commissioning completion of successful running in period and taking over of the installation by the department.	10%

- 11.8 Placing Order on UG Cables: Before placing orders on the manufacturer for supply of the cables, the contractor is required to carefully get assessed the exact requirement of each size of the cable at the site of work and get the same approved from the Engineer-in-charge. Department shall Not Take Back any spare quantity of cable whether in pieces or in sealed drums if procured more than that actually required at site / approved by the Engineer-in-charge. Even if advance payment is made for the cable and after erection surplus cables are found, the payment towards surplus cables made if any, shall be adjusted from the next on account bill of the contractor.
- 11.9 However, it may be noted that the contractor shall have to arrange extra quantity of the cable, over and above that assessed by the contractor, before start of the work and approved by the Engineer-in-charge, if such additional quantity of the cable is required at site, in order to make the installation as covered in the Reach and Scope of this work, in order to make the installation operational. Such extra quantity shall be paid as per terms of the Agreement.
- 11.10 Inspection & Testing – All the cable used at work should be tested before measurement of cables at work site as well as before use at work. The manufacturer test certificate should be produced at site at the time of delivery of cables at work site.

12.0 **WORKS TO BE DONE BY THE CONTRACTOR**

- 12.1 Unless otherwise mention in the tender document, the following works shall be done by the contractor and therefore their cost shall be deemed to be included in their tendered cost, whether specifically indicated in the schedule of work or not
- (i) Foundation for equipment including foundation bolts and vibration isolation spring and pads.
 - (ii) Suspenders, brackets and floor / wall supports for suspending / supporting pipes / cable trays.
 - (iii) Excavation and refilling of trenches in soil wherever the pipes are to be laid directly in ground, including a base treatment and supports.
 - (iv) Sealing of all floors / slabs / wall opening provided by the department or made by the contractor for pipes and cables from fire safety point of view, after laying of the same.
 - (v) Painting of all exposed metal surfaces of equipment's and components with appropriate colour
 - (vi) Making openings in the walls / floors / slabs or modifications in the existing openings wherever provided for carrying pipeline, cables etc.
 - (vii) All electrical works including cables / wires, earthing etc. beyond power supply made available by the department.
 - (viii) Making good all damages caused to the structure during installation and restoring the same to their original finish.
 - (ix) Approval from local bodies / fire authorities as may be required as per local by-laws. (The contractor's responsibility shall be limited to the work executed by him). The inspection fee of local bodies / fire authorities shall be borne by the department.
- 13.1 Care of the building: Care shall be taken by the contractor while handling and installing the various equipment's and components of the work to avoid damage to the building. He shall be responsible for repairing all damages and restoring the same to their original finish at hit cost. He shall also remove at his cost all unwanted and waste materials arising out of the installation from the site of work.

APPENDIX - E

QUALITY ASSURANCE, QUALITY AUDIT AND INSPECTION

1. Sole responsibility for Quality of work rests with the contractor through routine inspection and testing by the technical staff employed by the contractor. The quality of the work shall be assured through routine and random testing of materials and items of work in the field laboratory and outside laboratory.
2. **QUALITY AUDIT AND INSPECTION:** The Engineer-in-charge and / or his representative including the Third Party Inspecting Agency (TPIA) duly deputed by the Government may also assure proper quality being achieved by the.
3. **OUTSIDE LABORATORY:** The tests required to be conducted in outside laboratory shall be conducted in the laboratory as may be approved by the Engineer-in charge such as National Test House, Regional Research Laboratory, Regional Engineering College, Laboratory of other Engineering Colleges or any other laboratory.
4. **Non-association during Sampling and / or Testing:** In case the contractor or his authorized representative is not present or does not associate himself in collection of test samples, the test results / reports such tests and consequences thereon shall be binding on the contractor.
5. **Costs:**
 - a. Samples of materials / items of work required for testing in field or outside laboratory shall be provided free of cost by the contractor. The contractor shall also assist inspection and collection of samples for testing by Engineer-in-Charge or his authorized representative.
 - b. **Sampling:** All costs incurred in collection of samples, packing & transportation to the approved outside lab / field laboratory shall be borne by the contractor.

- c. Testing : The cost of tests conducted in outside approved laboratory, shall be borne by the contractor in the manner described below:
 - (i) By the contractor, if the test results show that the material / items of work do not conform to the relevant specifications.
 - (ii) By the contractor, if the test results show that the material / items of conform to the relevant specifications.
 - (iii) Contractor to facilitate all necessary help at no extra cost for carrying out:
 - a. Inspection of works.
 - b. Inspection at factories and collection of test samples there from.
 - c. Collection of samples of all materials brought at site.
 - d. Testing of all materials at field laboratory / outside laboratory approved by Engineer-in-Charge.
 - e. The contractor shall submit fortnightly work program to the Engineer-in-Charge in order to enable him / TPIA to supervise inspection of work and testing of materials.

14.1 ADDITIONAL CONDITIONS FOR EARTHING SYSTEM SCOPE

This section covers the general requirements of the earthing system for Sub-station installation & Protection of building against lightning.

14.1.1 SYSTEMS

Earthing system shall comprise earth electrodes in accordance with clause 8.2.1 of General specifications for Elect. Works (part I Internal) 2023. For every additional transformer 2 more separate and distinct earth electrodes shall be provided for neutral earthing. The body earthing for transformers, HV & MV panels shall be done to a common earth bus connected to two separate and distinct earth electrodes. For a two transformer sub- station total number of earth electrodes shall be 6 (4 for neutral earthing, two each for two transformers, and 2 for connection to a common earth bus for body earthing)

14.1.2 ELECTRODES

The earth electrodes shall be as per CPWD General Specifications for Electrical Works (Part I Internal) 2023.

14.1.3 LOCATION OF EAFRTH ELECTRODES

Normally an earth electrode shall not be situated less than 1.5m from any building. Care shall be taken that the excavation of earth electrode may not affect the column footings or foundation of the building. In such cases electrodes may be farther away from the building. The location of the electrode earth will be a place where the soil has reasonable chance of remaining moist. As far as possible, entrances, pavements and road ways, are to be definitely avoided for locating the earth electrode.

14.1.4 WATERING ARRANGEMENT

Method of watering arrangement shall comply with CPWD general specifications.

14.1.5 SIZE OF EARHT LEAD

The recommended sizes of copper earth bus lead in case of sub-stations shall be accordance with clause 8.2.2 of general specifications for electrical works (Part –I Internal) 2023 amended upto date. The minimum size of earth lead shall be 25 mm x 5 mm copper of equivalent GI strip.

14.1.6 INSTALLATION

All joints shall be riveted and sweated. Joints in the earth bar shall be bolted and the joints faces tinned. Where the diameter of the bolt for connecting earth bar to apparatus exceeds one quarter of the width of the earth bar, the connection to the bolt shall be made with a wider piece of flange of copper jointed to earth bar. These shall be tinned at the point of connection to equipment and special care

taken to ensure a permanent low resistance contact to iron or steel. All steel bolts, nuts, washers etc. shall be cadmium plated, main earth bars shall be spaced sufficiently on the surface to which they are fixed such as walls or the side trenches to allow for ease of connections. Copper earthing shall not be fixed by ferrous fittings. The earthing shall suitably be protected from mechanical injury by galvanized pipe wherever it passes through wall and floor. The portion within ground shall be buried at least 60 cm deep. The earthing lead shall be securely bolted and soldered to plate or pipe as the case may be. In the case of plate earthing the lead shall be connected by means of a cable socket with two bolts and nuts. All washers shall be of the same materials as the plate or pipe. All iron bolts nuts and washers shall be galvanized.

Earthing system shall comprise earth electrodes in accordance with clause 8.2. of General Specifications for electrical works (Part I internal) 2023. Normally an earth electrode shall not be situated less than 1.5 m from any building. GI Pipe electrode shall be used for earthing of internal electrical installations like DB, Meter Board, Feeder Pillars & Poles etc. GI plate electrode shall be used for firefighting pumps, water supply pumps, lightning conductors. Separate earth electrodes shall be provided for lightning arrestor / lightning conductors.

14.1.7 TESTING

After installation, the tests as specified in CPWD General Specifications for Electrical work (Part I Internal) 2023 shall be carried out and results recorded

Selection of Type of Electrodes

Following are general guidelines for the selection of the type of electrodes.

Number of Earth Electrodes.

- (i) In all cases, relevant provisions of Rules 33, 61 and 67 of the Indian Electricity Rules, 1956 as amended, shall be complied with.
- (ii) Non-current carrying metal parts of all apparatus utilizing power supply at voltage exceeding 250 volts shall be earthed by two separate and distinct connections to the earth bus, or to two separate and distinct earthing sets.

LIST OF PREFERRED MAKES FOR E & M WORKS

A	I.E.I., MCBDB & MCB, cable & Wires	
1	MCB DB (Sheet thickness 1.6 mm)	Legrand / C&S /Siemens /Schneider/ABB/ L&T
2	MCB / MCCB / Isolator / Industrial Plug Socket / RCCB / RCBO`s	Legrand (DX3) / Siemens (Betaguard) / Schneider (Acti 9)/ ABB (SB) / C&S (Wintrip 2) / L&T
2	Change Over Switch	Schneider/Siemens/ ABB/C&S
3	FRLS PVC ins. Copper cond. Single core cable for wiring (ISI marked)	Finolex/Havells/RR Kable/KEI/Polycab
4	Armoured/ Unarmoured telephone cable, coaxial cable	Finolex/Havells/RR Kable/KEI/Polycab
5	MS Conduit (ISI marked) with MS Conduit pipe accessories.	AKG/ BEC /RM CON/Precision
6	PVC Conduit (ISI marked) with PVC Conduit pipe accessories.	AKG/ norpack/ BEC/ Polypack
7	Modular Switch, Socket/Telephone socket/ cable TV Socket/ Data outlet socket/ Fan Regulator/ G I Boxes Etc (Wiring Accessories).	Legrand (arteor) /MK (BlenzPlus) / ABB (Ivie)/Havells(Murano)/Schneider (Unika Pure)
8	Selector Switch & Toggle switch	Salzer(L&T)/ Siemens/ Kaycee/ Rishabh/ ABB
9	DLP/PVC Trunking	MK/Schneider Electric / Legrand/Construct
10	GI pipe	Jindal /TATA/ SAIL
11	Paints	ICI/ Asian/Berger/Nerolac
12	Terminal Block & Connectors	Elmex/ Wago/ Hensel/ Connectwell
13	Phenolic laminated sheet/ Bakelite sheet	Hylem/ Formica (P-I grade)/ Mylam/ Greenlam.
14	Cat-6 cable, Wires &Fiber optic cable	Amp, Avaya/Beldon/Legrand/Molex/ Schneider/ D-Link/Polycab
B	Fans & Fittings	
1	LED Light Fittings/ LED type Flood Light Fittings	Phillips/Wipro/Trilux/LT/ Osram/Crompton
2	Ceiling fan/ Exhaust fan/ Wall fan	USHA/Havells/Crompton/Orient/Atomberg
3	Wall Bracket fitting	Havells/ Phillips/Wipro/Trilux/LT/Osram
4	Geysers	Racold/Havells/ Somany/Bajaj/Jaguar/Crompton
C	Sub -Station Equipments	
1	LT Panels/Feeder Pillar (Approval of CPRI shall not be older than 5 years)	Amit Project& Controls /Green Galaxy Electrotech /Associated Switchgears and Project Ltd. / C&S/ETC

		Electric Pvt. Ltd.
2	Power/ Aux. contactor 3/4 pole	Schneider Electric / Legrand/ Hager/ L&T/ ABB/ Seimens
3	Potential transformer/ Current Transformer	Automatic Electric/ Gilbert & Maxwell/ Matrix/ Precise/ L&T/ Kappa
4	LED type indicating lamp/ Push Button	Schneider Electric / L&T/ Seimens/ C&S/Vaishno
5	Over load Relays	Schneider Electric / L&T/ Seimens/ C&S/ABB/Havells
6	Conventional/ Electronic Digital Meters (A/V/PF/Hz/KW/KWH)	Conzerv/ L&T/ Secure/ AE/ C&S/HPL
7	Timer	Schneider Electric / Legrand/ Hager/ L&T/ ABB/ Seimens/ C&S
8	Fastners/ GI Clamp	Hilti/ Fisher/ Chilli/ GMGR
9	D.W. Corrugated HDPE pipe (ISI marked)	Rex/ Duraplast/ Triputi/ Duraline/ ASTRAL
10	Rubber Mat (ISI marked)	Jyoti/ Deep Jyoti/ Premier
11	Fire Extinguishers (ISI marked)	Minimax/ Safex/ Lifeguard/ Kalpex/Ceasefire/ Padmani
12	XPLE insulated PVC sheathed Alum. / Copper conductor Armored / Unarmored cable of 1.1 KV grade	Finolex/ RR Kabel/ KEI/ Havells/ Polycab
13	Cable Glands double compression with Earthing links	Comet/ Cosmos/ Dowells/ Gripwell
14	Bimetallic Cable Lugs	Comet/ Dowells(Biller India)/Hax Brass(Copper Alloy India) / Jainson/ Action.
15	MS / GI Pipe	Jindal/ Tata/ SAIL
16	PVC Pipe	Ashirvad/ Astral/Finolex/Flowguard/Supreme/Prince
17	Aluminium Composite Panel (ACP)	Alu Décor/ Alstrong/ Alucobond /Eurobond/Reynobond
18	Ornamental MS & CI Pole (Factory Finish)	Bajaj / Subham Poles / RR ISPAT / Trans Rail / Havells/Philips
19	Hot Dipped Galvanized Octagonal Pole (Factory Finish)	Bajaj / Subham Poles / RR ISPAT / Trans Rail / Havells/Philips
20	Cable Junction Box	Hensel/ Syntax/ Spelsberg / Neptune-bals
21	MS Channel, Angle, GI Sheet	Jindal Hissar/ TATA/ Sail

SCHEDULE OF WORK

Name of Work: RMO of E & M services installed at Data Centre NIC at 7th Floor, 1st MSO Building, Nizam Palace, Kolkata during 2026-27 (SH: Provision of electrical power connection, LAN and service connection at NIC).

Sl.No.	Sub-heads and item of work	Qty.	Rate	Unit	Amount	Remarks
1	Supplying and drawing following sizes of FRLS PVC insulated copper conductor, single core cable in the existing surface/ recessed steel/ PVC conduit as required.					
1.1	3 x 4 sq. mm	50	222.00	Mtr.	11100.00	DSR'25 1.17.21
2	Supplying and fixing of following sizes of medium class PVC conduit along with accessories in surface/recess including cutting the wall and making good the same in case of recessed conduit as required.					
2.1	25 mm	40	168.00	Mtr.	6720.00	DSR'25 1.21.2
3	Supplying and fixing following modular switch/ socket on the existing modular plate & switch box including connections but excluding modular plate etc. as required.					
3.1	5/6 amps switch	10	121.00	Each	1210.00	DSR'25 1.24.1
3.2	15/16 amp switch	10	176.00	Each	1760.00	DSR'25 1.24.3
3.3	3 pin 5/6 amp socket outlet	10	136.00	Each	1360.00	DSR'25 1.24.4
3.4	6 pin 15/16 amp socket outlet	10	219.00	Each	2190.00	DSR'25 1.24.5
4	Supplying and fixing following size/ modules, GI box along with modular base & cover plate for modular switches in recess etc as required.					
4.1	1 or 2 Module (75mmX75mm)	20	354.00	Each	7080.00	DSR'25 1.27.1
5	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).	5	757.00	Each	3785.00	DSR'25 1.56
6	Supplying and fixing following way, single pole and neutral, sheet steel, MCB distribution board, 240 volts, 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)					
6.1	12 way, Double door	2	2871.00	Each	5742.00	DSR'25 2.3.3
7	Supplying and fixing 5 amps to 32 amps rating, 240/415 volts, "C" curve, miniature circuit breaker suitable for inductive load of following poles in the existing MCB DB complete with connections, testing and commissioning etc. as required.					
7.1	Single pole	12	285.00	Each	3420.00	DSR'25 2.10.1

8	Supplying and fixing following rating, double pole, 240 volts, isolator in the existing MCB DB complete with connections, testing and commissioning etc. as required.					
8.1	40 amps	2	472.00	Each	944.00	DSR'25 2.12.1
9	Providing and fixing following rating and breaking capacity and pole MCCB in existing cubicle panel board including drilling holes in cubicle panel, making connections, Ics=100%Icu, etc. as required.					
9.1	63A,4P,25KA	1	11232.00	Each	11232.00	MR
10	Providing and fixing 25 mm X 5 mm copper strip on surface or in recess for connections etc. as required.	7	1246.00	Mtr.	8722.00	DSR'25 5.14
11	Supplying, Installation, Testing and commissioning of CAT6A Copper Information Outlet (IO) with face plate of color as per site requirement, should have ETL/UL verification program certificate for compliance with ANSI/TIA-568.2-D. All copper Cable and Components should be from same OEM to maintain compatibility and interoperability.	35	302.00	Each	10570.00	DSR'25 39.15
12	Supplying, drawing, Installation, Testing and commissioning of Cat6A UTP 4 pair, 23 AWG solid copper cable in existing conduit/ on surface, U/FTP, LSZH, Non-Plenum, Horizontal (solid) Cable suitable for high speed data networking application supporting upto 10Gbps over a 100 meter channel. The 4 Unshielded Twisted Pairs (UTP) cable with color coded insulation for easy identification should have FLAME PROPERTIES i.e. Flammability Test - IEC 60332-1, Smoke Density - IEC 61034, LSZH standards compliance: ANSI/TIA-568 C.2, ISO/IEC 11801, IEEE 802.3an, RoHS. Delay Skew should be < 45NS. The outer Cable Diameter should be 7.5 + 2 mm. Cable should have been tested and verified by UL/ ETL.					
12.1	1 Run of cable	170	74.00	Mtr.	12580.00	DSR'25 39.18.1
13	Supply of following sizes of AL conductor XLPE insulated unarmored power cable of 1.1 KV grade and conforming to IS 7098(Part 1) 1988 at site of work etc as required.					
13.1	3½ core 35 sq mm	12	470.00	Mtr.	5640.00	MR
14	Supply of following sizes of AL conductor XLPE insulated armoured power cable of 1.1 KV grade and conforming to IS 7098(Part 1) 1988 at site of work etc as required.					
14.1	3 core 25 sq mm	100	347.00	Mtr.	34700.00	MR
14.2	3½ X 70 sq. mm	90	888.00	Mtr.	79920.00	MR
15	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.					
15.1	3 X 25 sq. mm (25mm)	2	330.00	Each	660.00	DSR'25 11.1.9
15.2	3½ X 35 sq. mm (32 mm)	2	371.00	Each	742.00	DSR'25 11.1.20
15.3	3½ X 70 sq. mm (38mm)	2	542.00	Each	1084.00	DSR'25 11.1.23

16	Supply and fixing of IP44 rated,32A,5 pin industrial plug and socket connector set etc as req.	4	1583.00	Each	6332.00	MR
17	Supply and fixing of Rack PDU each having minimum of 8 nos. C19/C20, 20A rated outlets.	2	16909.00	Each	33818.00	MR
18	Supply, installation, testing and commissioning of 63A,415V,50 Hz, 4 pole, on load manual changeover switch in sheet Enclosure complete with internal interlocks and connection etc as req.	1	9030.00	Each	9030.00	MR
19	Laying and fixing of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size on wall surface as required.					DSR'25 10.7
19.1	Upto 35 sq. mm (clamped with 1mm thick saddle)	112	64.00	Mtr.	7168.00	DSR'25 10.7.1
19.2	Above 35 sq. mm and upto 95 sq. mm (clamped with 25x3mm MS flat clamp)	90	151.00	Mtr.	13590.00	DSR'25 10.7.2
					Total	2,81,099.00

Assistant Engineer (E)
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