Government of India
Ministry of Communication
Department of Posts
Electrical Wing
Postal Electrical Division,
New Delhi

NIT No:PED/ND/NIT-8/26-27/D-200 Dated: 18.05.2026

T E N D E R D O C U M E N T

For the work of

Name of work: Electrical repair and maintenance work for ground floor at Sector-7 Post Office building, Faridabad (HR).

EC: ₹**807116/-** **EMD**: ₹16142/- Time:**60Days**

Certified that this tender document contains pages from 01 to 76 only

Executive Engineer (E)
Postal Electrical Division
New Delhi

Name of work:**"Electrical repair and maintenance work for ground floor at Sector-7 Post Office building, Faridabad (HR)."**.

INDEX

S. No.	Details	Pages	
		From	To
1.	Cover Page	1	1
2.	Index	2	2
3.	Instructions to the contractors/bidders for the e-submission of the bids online through tender site https://eprocure.gov.in/eprocure/app	3	5
4.	CPWD 6	7	12
5.	Format of Receipt of deposition of original EMD	13	13
6.	List of Executive Engineer's with Address	14	14
7.	Form of Earnest Money (Bank Guarantee)	15	15
8.	AFFIDAVIT	16	16
9.	Form of Certificate of Annual Turnover on works from Chartered Accountant	17	17
10.	Undertaking	18	18
11.	CPWD-7	19	20
12.	Performa of schedules	21	24
13.	For use in DOP Correction slip No.1	25	25
14.	General Terms and Conditions Applicable for All E&M Components	26	33
15.	Additional, Commercial & Technical Conditions for IEI & Fans	34	47
16.	Product Directory	48	50
17.	Schedule of Quantity	51	76

This N.I.T./agreement contains 76 Nos. pages.

Executive Engineer (E)
Postal Electrical Division
New Delhi.

SPECIAL INSTRUCTIONS TO THE CONTRACTORS/BIDDERS FOR THE E-SUBMISSION OF THE BIDS ONLINE THROUGH TENDER SITE https://eprocure.gov.in/eprocure/app

The bidders are required to submits of copies of their bid select ronically on the CPP Portal, using valid Digital Signature Certificates. The instructions given below are meant to assist the bidders in registering on the CPP Portal, prepare their bids in accordance with the requirements and submitting their bids online on the CPP Portal.

MoreinformationusefulforsubmittingonlinebidsontheCPPPortalmaybeobtained at: https://eprocure.gov.in/eprocure/app .

Registration

1. Bidders are required to enrol on the e-Procurement module of the Central Public Procurement Portal (URL:https://eprocure.gov.in/eprocure/app) by clicking on the link "Online bidder Enrolment" on the CPP Portal which is free of charge.
1. As part of the enrolment process, the bidders will be required to choose a unique username and assign as password for their accounts.
2. Bidders are advised to register their valid email address and mobile numbers as part of the registration process. These would be used for any communication from the CPP Portal.
3. Upon enrolment, the bidders will be required to register their valid Digital Signature Certificate (Class III Certificates with signing key usage) issued by any Certifying Authority recognizedbyCCAIndia(e.g.Sify/nCode/eMudhraetc.),withtheirprofile
4. Only one valid DSC should be registered by a bidder. Please note that the bidders are responsible to ensure that they do not lend their DSC's to others which may lead to misuse.
5. Bidder then logs into the site through the secured log-in by entering their user ID/password and the password of the DSC /e-Token.

Searching for Tender Documents

1. There are various search options built in the CPP Portal, to facilitate bidders to search active tenders by several parameters. These parameters could include Tender ID, Organization Name, Location, Date, Value, etc. There is also an option of advanced search for tenders, wherein the bidders may combine a number of search parameters such as Organization Name, Form of Contract, Location, Date, Other key words etc. to search for tender published on the CPP Portal.
1. Once the bidders have selected the tenders they are interested in, they may download the required documents /tender schedules. These tenders can be moved to the respective 'My Tenders' folder. This would enable the CPP Portal to intimate the bidders through SMS / e- mail in case there is any corrigendum issued to the tender document.
2. The bidder should make a note of the unique Tender ID assigned to each tender, in case they want to obtain any clarification/help from the Help desk.

Preparation of Bids

1. Bidder should take into account any corrigendum published on the tender document before submitting their bids.
1. Please go through the tender advertisement and the tender document carefully to understand the documents required to be submitted as part of the bid. Please note the number of covers in which the bid documents have to be submitted, the number of documents - including the names and content of each of the document that need to be submitted. Any deviations from these may lead to rejection of the bid.
2. Bidder, in advance, should get ready the bid documents to be submitted as indicated in the tender document /schedule and generally, they can be in PDF / XLS / RAR / DWF/JPG formats. Bid documents may be scanned with 100 dpi with black and white option which helps in reducing size of the scanned document.

3. Toavoidthetimeandeffortrequiredinuploadingthesamesetofstandarddocumentswhich are required to be submitted as a part of every bid, a provision of uploading such standard documents (e.g. PAN card copy, annual reports, auditor certificates etc.) has been provided to the bidders. Bidders can use "My Space" or ''Other Important Documents'' area available to them to upload such documents. These documents may be directly submitted from the "My Space" area while submitting a bid, and need not be uploaded again and again. This will lead to a reduction in the time required for bid submission process.

Note: My Documents space is only a repository given to the Bidders to ease the uploading process. If Bidder has uploaded his Documents in My Documents space, this does not automatically ensure these Documents being part of Technical Bid.

Submission of Bids

1. Bidder should log into the site well in advance for bid submission so that they can upload the bid in time i.e. on or before the bid submission time. Bidder will be responsible for any delay due to other issues.
1. The bidder has to digitally sign and upload the required bid documents one by one as indicated in the tender document.
2. Bidder has to select the payment option as "offline" to pay the tender fee / EMD as applicable and enter details of the instrument.
3. Bidder should prepare the EMD as per the instructions specified in the tender document. The original should be posted/couriered/given in person to the concerned official, latest by the last date of bid submission or as specified in the tender documents. The details of the DD/any other accepted instrument, physically sent, should tally with the details available in the scanned copy and the data entered during bid submission time. Otherwise the uploaded bid will be rejected.
4. Bidders are requested to note that they should necessarily submit their financial bids in the format provided and no other format is acceptable. If the price bid has been given as a standard BoQ format with the tender document, then the same is to be downloaded and to be filled by all the bidders. Bidders are required to download the BoQ file, open it and complete the white coloured (unprotected) cells with their respective financial quotes and other details (such as name of the bidder). No other cells should be changed. Once the details have been completed, the bidder should save it and submit it online, without changing the filename. If the BoQ file is found to be modified by the bidder, the bid will be rejected.
5. Theservertime(whichisdisplayedonthebidders'dashboard)willbeconsideredasthestandardtime for referencing the deadlines for submission of the bids by the bidders, opening of bids etc. The bidders should follow this time during bid submission.
6. All the documents being submitted by the bidders would be encrypted using PKI encryption techniques to ensure the secrecy of the data. The data entered cannot be viewed by unauthorized persons until the time of bid opening. The confidentiality of the bids is maintained using the secured Socket Layer 128 bit encryption technology. Data storage encryption of sensitive fields is done. Any bid document that is uploaded to the server is subjected to symmetric encryption using a system generated symmetric key. Further this key is subjected to asymmetric encryption using buyers/bid opener's public keys. Overall, the uploaded tender documents become readable only after the tender opening by the authorized bid openers.
7. The uploaded tender documents become readable only after the tender opening by the authorized bid openers.
8. Upon the successful and timely submission of bids (i.e. after Clicking "Freeze Bid Submission" in the portal), the portal will give a successful bid submission message & a bid summary will be displayed with the bid no. and the date & time of submission of the bid with all other relevant details.
9. Thebidsummaryhastobeprintedandkeptasanacknowledgementofthesubmissionofthebid.This acknowledgement may be used as an entry pass for any bid opening meetings.

Assistance to Bidders

1. Any queries relating to the tender document and the terms and conditions contained there in should be addressed to the Tender Inviting Authority for a tender or the relevant contact person indicated in the tender.
1. Any queries relating to the process of online bid submission or queries relating to CPP Portal in general maybe directed to the 24x7 CPP Portal Helpdesk.

NOTICE INVITING TENDER (e-TENDERING MODE)

Government of India
Ministry of Communication & IT
Department of Posts – Electrical Wing
O/o The Executive Engineer (E)
Postal Electrical Division,
10th floor Meghdoot Bhawan, New Delhi

NIT No:PED/ND/NIT-8/26-27/D-200 Dated: 18.05.2026

The Executive Engineer (E), Postal Electrical Division, New Delhi on behalf of the President of India invites online Percentage rate bids from approved and eligible of DOP and those of appropriate/enlisted list of CPWD, DOT, MES, BSNL and Building and Roads wing of respective State/UT P.W.D. for e-Tendering as per CPWD-6 for the following work.

NIT No.	**No:PED/ND/NIT-8/26-27/D-200 Dated:18.05.2026**
Name of work	**Electrical repair and maintenance work for ground floor at Sector-7 Post Office building, Faridabad (HR).**
Estimated Cost	**₹807116/-**
EMD	**₹16142/-**
Contract Period	**60Days**
Last Date & Time of Submission of Technical And Financial Bid	**25.05.2026 up to 15:00 Hours**
Date & Time of Opening of Technical Bid	**26.05.2026 up to 15:00 Hours**

The enlistment of the contractor should be valid on the last date of submission of tender. In case only the last date of submission of tender is extended, the enlistment of contractor should be valid on the original date of submission of tender.

1.1 This estimate, however, is given merely as a rough guide.

1.2 **Criteria of eligibility for submission of bid documents**:

1.2.1 The firms should be Registered/ Enlisted in appropriate class and category for Electrical Work in DOP/ BSNL/CPWD/ Railways/ MES / Buildings & Roads wing of respective State/UT P.W.D.

1.2.2 Criteria of eligibility for Non DOP Enlisted Contractors :-

A. PHYSICAL:-

(a) Non-DoP enlisted contractors should have satisfactorily completed the works as mentioned below in Central/ State Government department / Central Autonomous Body / Central PSU during last seven years ending previous day of last date of submission of bids:

(i) Three similar works each for value not less than₹ 322846/-i.e. 40% of the estimated cost put to tender

OR

(ii) Two similar works each for value not less than₹ 484270/- i.e. 60% of the estimated cost put to tender

OR

(iii) One similar work each for value not less than ₹ 645693/- i.e. 80% of the estimated cost put to tender

NOTE:

*(i) For the purpose of this clause '**similar work**' means, the tenderer should have experienced of **"EI Work".***

(ii) The value of all above executed works shall be brought to current costing level by enhancing the actual value of work at simple rate of 7% per annum calculated from the date of completion to previous day of last date of submission of tenders.

(iii) Certificate of successful completion of work in respect of the experience should be issued by an officer not below the rank of Executive Engineer or equivalent. The work done certificate shall clearly indicate amount of work done, date of start, date of completion, time period (stipulated and actual). The works not completed in stipulated time where levy of compensation is imposed are not considered satisfactory for work experience..The completion certificate without these details shall not be considered and tender shall be rejected.

(iv) Joint Ventures are not accepted.

B. FINANCIAL:-

Average Annual financial turnover on works during the last 3 financial years, ending 31st March of the previous financial year, should be at least 50% of the estimated cost put to tender. CA Certificate with Unique Document Identification Number (UDIN) to establish the turnover on works copy of the same is to be uploaded by the firm (as per page no 29 of this NIT). Year in which no turnover is shown would also be considered for working out the average. The value of annual turnover figures shall be brought to the current value by enhancing the actual turnover figures at simple rate of 7% per annum.

C. Affidavit:

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 for bidding in DOP 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. (Scanned copy to be uploaded at the time of submission of bid as per Annexure-IV)

1.2.3 The firm should have valid GST registration certificate, if already obtained by the bidder. If the bidder has not obtained GST registration as applicable, then he will scan and upload the following undertaking: "If work is awarded to me, l/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 the Department, whichever is earlier, failing which l/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 the department or GST department in this regard."

1.2.4 The firm should have valid PAN Card.

1.2.5 The firm should have valid Electrical contractor's license as per IE rule/Central Electrical Authority (Measures relating to safety and electric supply) Regulations 2010.

2. Agreement shall be drawn with the successful Tenderer on prescribed Form No. CPWD-7/~~8~~, which is available as a Govt. of India Publication and also available on website:

www.cpwd.gov.in Tenderer shall quote his rates as per various terms and conditions of the said form, and various general and special conditions attached which will form part of the agreement.

3. The time allowed for carrying out the work will be **60Days** 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 the phasing if any, indicated in the tender documents.

4. The site for the work is available.

5. The bid documents consisting of plans, specifications, the schedule of quantities of the various types of items to be executed and the set of terms and conditions of contract to be complied with and other necessary documents except standard General Conditions of Contract Form can be seen and downloaded from website: http://eprocure.gov.in/eprocure/app free of cost.

6. After submission of the bid the contractor can **re-submit revised bid** any number of times or withdraw the bid before last date of time of submission of bid as notified.

7. While submitting the revised bid, contractor can revise the rate of one or more time(s) any number of times (he need not re-enter rate of all the items) but before last date of submission of bid as notified.

8. Earnest money of ₹16142/-in the form of Insurance Surety Bonds, Account Payee Demand Draft, Fixed Deposit Receipt, Banker's Cheque or Bank Guarantee including e- Bank Guarantee (for balance amount as prescribed) from any of the Commercial Banks (in favour of Sr. Accounts Officer, Postal Electrical Division, New Delhi) 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 Executive Engineer (E) inviting bids or division office of any Executive Engineer (Electrical/Civil), Postal Electrical /Civil Division anywhere in India with in the period of bid submission. The EMD receiving Executive Engineer (including NIT issuing EE) shall issue a receipt of deposition of earnest money deposit to the bidder in a prescribed format below uploaded by tender inviting EE in the NIT. Without uploading the receipt of deposition of EMD at Postal Divisions (Civil/Electrical) and scanned copy of EMD, intended to be deposited tender may be treated as cancelled.

   Earnest Money can also be deposited through RTGS/NEFT in the account of AO Postal Electrical Division New Delhi, having **A/Cs Name- Accounts Officer, Postal Electrical Division New Delhi Account no. 32306990367 IFS code SBIN0000691..** The unique transaction reference (UTR) of RTGS/NEFT shall have to be uploaded by the bidder in the e-tendering system by the prescribed date. The Executive Engineer concerned will get earnest money verified from the Bank based on the unique transaction reference number against each RTGS/NEFT payment before the tenders are opened.
   Note:-i) Earnest money must be deposited through separate transaction.
   ii) The bidder will use one UTR for one work only. In case it is found that he has used one UTR number for different tenders, all the tenders submitted by him will be rejected and he debarred from further tendering in the department in future.

   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 including e- Bank Guarantee of any Commercial bank having validity for a period of 90 days for single bid works and 180 days for two bid system or more from the last date of receipt of bids which is to be scanned and uploaded by the intending bidders.
   The earnest money given by all the tenderers except the lowest tenderer shall be refunded immediately after the expiry of stipulated bid validity period or immediately after acceptance of the successful bidder, whichever is earlier. However, in case of two/ three bid system, earnest

money deposit of bidders unsuccessful during technical bid evaluation etc. should be returned within 30 days of declaration of result of technical bid evaluation.

9. Copy of Enlistment Order and certificate of work experience and other documents as specified in the notice inviting e- tender shall be scanned and uploaded on the e-Tendering website within the period of bid submission. However, certified copy of all the scanned and uploaded documents as specified in e- tender notice shall have to be submitted by the lowest bidder 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, who has deposited EMD with any division of DOP and other documents scanned and uploaded are found in order.
10. The e-Tenders shall be submitted under two envelopes system to the e-tendering website before 25.05.2026 up to 15:00 Hours, the 1st electronic envelope will be named as ***Technical BID Envelope***& shall contain documents of bidder's satisfying the eligibility conditions and 2nd electronic envelope shall be named as ***Financial BID Envelope*** containing Schedule/Bill of Quantities (BoQ). These envelopes shall contain one set of the following documents.

A) Technical Bid shall contain the scan copies in PDF format of following documents:

a) Tender Document in pdf format digitally signed. If the tender document is not uploaded, Financial Bid shall not be opened.
b) Receipt of deposition of original EMD issued from division office of any Executive Engineer (including NIT issuing EE); if deposited in physical form, NEFT/RTGS receipt (online payment receipt with UTR number).
c) Valid Enlistment Order/ Registration certificate in the appropriate class of appropriate Authority as applicable.
d) Certificate of WORK EXPERIENCE CERTIFICATES of requisite magnitude with appropriate Authority as per NIT in .pdf format. The bidder/contractor is required to submit satisfactory work completion certificate issued by an officer not below the rank of Executive Engineer or equivalent. The work done certificate shall clearly indicate (i) amount of work done; (ii) stipulated and actual date of start; (iii) stipulated and actual date of completion; and (iv) EOT granted with or without levy of compensation. The works not where levy of compensation is imposed are not considered satisfactory for work experience. The completion certificate without these details shall not be considered and tender shall be rejected.
e) Chartered Accountant's Certificate for turnover on works for last 3 financial years in .pdf format as per Annexure-IV of this NIT.
f) Valid electrical Contractor License as per IE Rules/Central Electrical Authority (Measures relating to safety and electric supply) Regulations 2010.
g) PAN card.
h) Certificate of registration of GST.
i) Undertaking as per Annexure-V, duly signed and stamped.
j) Scanned Copy of Affidavit (on non-judicial stamp paper of value Rs. 10/- and duly notarized as per Annexure-III of this NIT).
k) GST registration certificate of the state in which the work is to be taken up, if already obtained by the bidder. If the bidder has not obtained GST registration in the state in which work is to be taken up, or as required by GST authorities, then in such a case the bidder shall scan and upload following undertaking along with other bid documents-
"If work is awarded to me, I/we shall obtain GST registration certificate of the state, in which work is to within one month from the date of receipt of award letter or before release of any payment by DoP, 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 DoP or GST department in this regard".
l) Any other document required to establish the eligibility as per the NIT conditions.

B) Financial Bid envelope shall contain

a) Schedule of Quantities (SoQ) in .xls format.

11. The online bids shall be submitted 25.05.2026 up to 15:00 Hours. Online Technical bid envelope will be opened by Executive Engineer (E), Postal Electrical Division, New Delhi or his authorized representative in his office at 26.05.2026 up to 15:00 Hours.In case the date of opening of bid is declared to be a holiday, the date of opening of bid will get shifted automatically to next working day at the same scheduled time. The technical bid envelope will be evaluated first and thereafter financial bid envelope of eligible bidders only shall be opened.

    i. The bidder shall have to download the Full Tender Documents and again shall upload the documents with Digital Signature before the prescribed date and time of submission.

    ii. All documents shall be self-attested/digitally signed & original document may be demanded at any time before or after award of work.

12. The bid submitted shall become invalid, if:

(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 tenderer quotes 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 tenderer

13. The contractor whose bid is accepted will be required to furnish performance guarantee of **5% (Five Percent)** of the tendered amount within the period specified in Schedule F. This guarantee shall be in the form of Insurance Surety Bonds, Account Payee Demand Draft, Fixed Deposit Receipt or Bank Guarantee from any of the Commercial Banks 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 of 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 within the period specified in Schedule F.

14. **The description of the work is as follows: Electrical repair and maintenance work for ground floor at Sector-7 Post Office building, Faridabad (HR).**

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 bidders 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. The bidders shall be responsible for arranging and maintaining at his own cost all materials, tools & plants, water, electricity access, facilities for workers and all other services required for executing the work unless otherwise specifically provided for in the contract documents. 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 stores, 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.

15. 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 bidders shall be summarily rejected.
16. Canvassing whether directly or indirectly, in connection with tenders is strictly prohibited and the tenders submitted by the contractors who resort to canvassing will be liable to rejection.
17. 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 bidders shall be bound to perform the same at the rate quoted.
18. The contractor shall not be permitted to bid for works in the Postal Electrical Circle 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 Department of Posts. Any breach of this condition by the contractor would render him liable to be debarred for tendering in this Department.
19. 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.
20. The bid for the works shall remain open for acceptance for a period of **Seventy Five (75) days** from the date of opening of bids.
    Further, i) If any tenderer withdraws his tender or makes any modification in the terms & conditions of the tender which is not acceptable to the department within 7 days after last date of submission of bids, then the Government shall without prejudice to any other right or remedy, be at liberty to forfeit 50% of the earnest money absolutely irrespective of letter of acceptance for the work is issued or not.
    ii) If any tenderer withdraws his tender or makes any modification in the terms & conditions of the tender which is not acceptable to the department after expiry of 7 days after last date of submission of bids, then the Government shall without prejudice to any other right or remedy, be at liberty to forfeit 100% of the earnest money absolutely irrespective of letter of acceptance for the work is issued or not.
    iii) In case of forfeiture of earnest money as prescribed in para (i) and (ii) above, the bidders shall not be allowed to participate in the rebidding process of the same work.
21. 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 10 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, specifications and drawings, if any, forming a part of the bid as uploaded at the time of invitation of bid and the rates quoted online (in BoQ_XXXX.xls file) at the time of submission of bid and acceptance thereof together with any acceptance thereof together with any correspondence leading thereto.
    b. Standard C.P.W.D. Form 7 or other standard CPWD Form as applicable.
22. Integrity Pact: The contractor shall download the Integrity Pact, which is a part of tender documents, affix his signature in the presence of a witness, and upload the same while submitting online bids for all works of estimated cost put to tender equal or more than the threshold value given in Schedule-F. In the event of his failure to sign and upload the Integrity Pact along with other bid documents, his bid shall be rejected.

23. In case any discrepancy is noticed between the document as uploaded at the time of submission of the bid online and hard copies as submitted physically in the office of Executive Engineer, then the bid submitted shall be come invalid and 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 tenderer shall not be allowed to participate in the rendering process of the work.

24. The intending bidders are required to upload their bids well in advance of last date of submission of tender. Any issue related to uploading tender can be resolved through the concerned Assistant Engineer (E), PESD, PESD Ambala or website helpline no. 0120-4001002, 0120-4001005, 0120- 4493395 or e-mail: support-eproc@nic.in for Technical Support & cppp-doe@nic.in for Policy related issue. The e-tendering bidders are also advised not to wait to raise any issues till the last date of submission of bid in their own interest.

Executive Engineer (E)
Postal Electrical Division
New Delhi.
For & on behalf of President of India

Format of Receipt of deposition of original EMD

Receipt of deposit of original EMD (Receipt No._____ Dated_____)

1.	*Name of Work*	*Electrical repair and maintenance work for ground floor at Sector-7 Post Office building, Faridabad (HR).*
2.	*NIT No*	*No:PED/ND/NIT-8/26-27/D-200 Dated:18.05.2026*
3.	*Estimated Cost*	*₹807116/-*
4.	*Amount of EMD Deposit*	*₹16142/-*
5.	*Last date of Submission of Bid*	*25.05.2026 up to 15:00 Hours*
6.	*Date Of Opening*	*26.05.2026 up to 15:00 Hours*

1. *Name of Contractor :……#*
2. *Form of EMD : ……#*
3. *Amount of Earnest Money Deposit:……#*
4. *Date of submission of EMD: ……#*

(# To be filled by EMD receiving EE)

Signature, Name and Designation of EMD receiving Officer
(EE/ AE(P)/ AE/ AAO) along with Office Stamp

1. *The Executive Engineers of all Postal Civil / Electrical Divisions should receive the physical EMD of other divisions.*
2. *The Executive Engineer receiving the physical EMD shall examine the EMD deposition by the bidder and shall issue the receipt of deposition of Earnest Money in the above format. The receipt may be issued by AE / AAO.*
3. *The Executive Engineer receiving physical EMD should also intimate tender inviting Executive Engineer about deposition of EMD by bidder through e-mail / fax or over phone.*
4. *The tender inviting Executive Engineer will call for physical EMD of the L-1 bidder from EMD receiving Executive Engineer immediately.*
5. *The physical EMD receiving Executive Engineer shall release the EMD after verification from the e-tendering portal website http://eprocure.gov.in/eprocure/app[Tender Status> AOC] for the tender ID to be obtained from the tender inviting Executive Engineer) that the particular contractor is not L-1 bidder and work is awarded.*
6. *List of Executive Engineers (along with address), where physical EMD can be deposited is enclosed as Annexure -II.*

List of Executive Engineer's with Address

The Executive Engineer (C) Postal Civil Division, GPO Building , Ambala-133001 0171- 2647521	The Executive Engineer (C) Postal Civil Division, R.N. Compound, Opp. Raj Bhawan, Shillong-793001, 0364 – 2224398	The Executive Engineer (C) Postal Civil Division, 2nd Floor, HPO Building, Rajkot- 360001
The Executive Engineer (C) Postal Civil Division, PO Building, 1st Floor, Summer Hill, Shimla- 171005 0177 – 2832943	The Executive Engineer (C) Postal Civil Division, GPO Building, Mysore Road, Bangalore- 560001, 080- 23332025	The Executive Engineer (C) Postal Civil Division, 2nd Floor, HPO Building Shastri Nagar, Jaipur – 302016 0141-2365941
The Executive Engineer (C) Postal Civil Division, HPO Bldg. Civil Lines Allahabad-211001, 0532- 2622150	The Executive Engineer (C) Postal Civil Division, K.C. Park, P.O. Compound, Dharwad- 580008, 0836 – 2445252	The Executive Engineer (C) Postal Civil Division,5th Floor, C.T.T. Nagar,PO Building Bhopal-462003 0755- 2779149
The Executive Engineer (C) Postal Civil Division, PO Building, Sector- C, Aliganj, Lucknow-226024, 0522 – 2335165	The Executive Engineer (C) Postal Civil Division, No. 5, EthirajSalai, Chennai-600008, 044- 28203435	The Executive Engineer (E) Postal Electrical Division-I, Meghdoot Bhawan,New Delhi-110001, 011-23514049
The Executive Engineer (C) Postal Civil Division, Postal Colony, Roop Nagar, Jammu-180013, 0191- 2592924	The Executive Engineer (C) Postal Civil Division, Manacaud, P.O. Trivandrum- 695009, 0471 – 2466748	The Executive Engineer (E) Postal Electrical Division-II, Meghdoot Bhawan, New Delhi-110001,
The Executive Engineer (C) Postal Civil Division, MeghdootBhawan, New Delhi-110001, 011- 23628366	The Executive Engineer (C) Postal Civil Division, PO Building, Mumbai- 400022, 022 – 24013900	The Executive Engineer (E) Postal Electrical Division, Yogayog Bhawan, P-36, CR-Avenue, Kolkata-700012, 033-22120646, 22120637
The Executive Engineer (C) Postal Civil Division, MeghdootBhawan, GPO Compound, Patna-800001, 0612 – 2226070	The Executive Engineer (C) Postal Civil Division, Khadki PO Compound, Pune-411003 020-25817762	The Executive Engineer (E) Postal Electrical Division, PO Building, Sector-C Aliganj, Lucknow-226001 0522 – 2336053
The Executive Engineer (C) Postal Civil Division, 3rd floor, Postal Store Depot building, satyanagar, Bhubaneswar – 751 007 0674 – 2570960	The Executive Engineer (C) Postal Civil Division, Akashwani Square, DA (P) Compound, Nagpur- 400010 0712-2540368	The Executive Engineer (E) Postal Electrical Division 2nd Floor, Basvangudi HPO, Bansvangudi, Bangalore - 560004 080 – 26676804
The Executive Engineer (C) Postal Civil Division,YogayogBhawan, P-36, CR-Avenue, Kolkata-700012, 033 – 22121441	The Executive Engineer (C) Postal Civil Division, Gandhi Nagar, PO Building, Hyderabad-500080 040- 23463910, 909, 908	The Executive Engineer (E) Postal Electrical Dividion 3rd Floor, PO Building Mumbai-400022
The Executive Engineer (C) Postal Civil Division, MeghdootBhawan Complex, Guwahati-780001 0361 – 2542679	The Executive Engineer (C) Postal Civil Division, Admin Building, Khanpur, Ahmedabad- 380001	The Executive Engineer (E) Postal Electrical Dividion CSO, Gandhi Nagar,Jaipur-302015 0141 – 2708841

Executive Engineer (E)
Postal Electrical Division
New Delhi

FORM OF EARNEST MONEY (BANK GUARNATEE)

WHEREAS, contractor …….. (Name of contractor) (Hereinafter called "the contractor") has submitted his tender dated ……. (Date) for the work of …….. (Name of work) (Hereinafter called the tender").

KNOW ALL PEOPLE by these presents that we…….. (Name of Bank) having our registered office at …….. (Hereinafter called "the Bank") are bound unto…….. Name and division of Executive Engineer) (Hereinafter called "the Engineer in charge) in the sum of Rs……. (Rupees in works……..) for which payment well and truly to be made to the said Engineer in charge the Bank binds itself, his successors and assigns by these presents.

SEALED with the Common Seal of the said Bank this…… day of ……..20……

THE CONDITIONS of this obligation are:

(1) If after tender opening the Contractor withdraws, his tender during the period of validity of tender (including extended validity of tender) specified in the Form of Tender:

(2) If the contractor having been notified of the acceptance of his tender by the Engineer in charge.

(a) Fails or refuses to execute the Form of Agreement in accordance with the Instructions to contractor, if required, OR

(b) Fails or refuses to furnish the Performance Guarantee, in accordance with the provision of tender document and instructions to contractor, OR

We undertake to pay to the Engineer in charge **either** upto the above amount **or part thereof** upon receipt of first written demand, without the Engineer in charge having to substantiate his demand, provided that in his demand the Engineer in charge will note that the amount claimed by him…… condition or conditions.

This Guarantee will remain in force upto and including the date*……. After the deadline for submission of tender as such deadline is stated in the Instructions to contractor or as it may be extended by the Engineer in charge notice of which extension(s) to the Bank is hereby waived. Any demand kin respect of this Guarantee should reach the Bank not later than the above date.

DATE ……. SIGNATURE OF THE BANK

WITNESS…….. SEAL

(SIGNATURE, NAME AND ADDRESS)

*Date to be worked out on the basis of validity period of 6 months from last date of receipt of tender.

AFFIDAVIT

{Notarized affidavit shall be made on non-judicial stamp paper of value not less than Rs.10/-}
(Scanned copy to be submitted by bidder at the time of submission of bid)

"I, ...(Name), Son/Daughter/wife of ..... aged about..... years, resident of ..... (Full Address) by Occupation- Contractor, by Nationality- Indian, do hereby solemnly affirm on oath and declare as under: "

NIT No:PED/ND/NIT-8/26-27/D-200 Dated: 18.05.2026

Name of Work: Electrical repair and maintenance work for ground floor at Sector-7 Post Office building, Faridabad (HR).

I/We undertake and confirm that eligible similar work(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 for bidding in DOP-Civil wing 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 forefeit the entire amount of Earnest Money Deposit/Performance Guarantee.

(Signature of the Bidder with official Seal)

Form of Certificate of Annual Turnover on works from Chartered Accountant

Certified that following is the annual turnover on works of the individual/firm/company as per returns filed with Income Tax Department for the past 3(three) financial years.

Name and registered address of individual/firm/company_____
_____

SL NO	Financial Year	Annual Turnover on Works in ₹

Unique Document Identification Number
(UDIN)_____

(Signature of Chartered Accountant)

(Name of Chartered Accountant)

Membership No. of ICAI

Date and seal

UNDERTAKING

To be submitted by bidders (on company letter head duly singed with stamp & seal) online as well as offline on or beforelast date of submission of bids.

To,

The Executive Engineer (E)
Postal Electrical Division,
New Delhi

Sub: Acceptance of Terms & Conditions of Tender.

NIT No:PED/ND/NIT-8/26-27/D-200 Dated:18.05.2026

Name of work: "Electrical repair and maintenance work for ground floor at Sector-7 Post Office building, Faridabad (HR)."

Dear Sir,

1. I/We have downloaded/obtained the tender document(s) for the above mentioned Tender/Work from the web site namely: http://eprocure.gov.in/eprocure/app as per your advertisement, given in the above mentioned website.
2. I/We hereby certify that I/We have read the entire terms and conditions of the tender document from Page No. 1 to 76 + BOQ (including all documents like annexure, schedules etc.) which form part of the contract agreement and I/We shall abide hereby by the terms/conditions/clauses contained therein.
3. The corrigendum(s) issued from time to time by your department/organization too has also been taken into considerations, while submitting their acceptance letter.
4. I/ We hereby unconditionally accept the tender conditions of above mentioned tender document(s) /corrigendum(s) in it's totally/entirety.
5. I/We hereby undertake that the certified copy of all the scanned and uploaded documents as specified in notice inviting tender shall be deposited by me/us in the office of Executive Engineer (E), Postal Electrical Division New Delhi, in case I/we become the lowest bidder within seven days of the opening of financial bid otherwise department may reject the bid and also take action to debar me/us from tendering in Department of Posts.
6. In case any provisions of this tender are found violated, then your department/ organisation shall without prejudice to any other right or remedy be at liberty to reject this tender/bid including the forfeiture of the full said earnest money deposit absolutely.

Yours Faithfully

(Signature of the Bidder, with Official Seal)

GOVERNMENT OF INDIA
DEPARTMENT OF POSTS

State	: New Delhi	Circle	: New Delhi
Branch	: Civil Wing	Division	: New Delhi.
Zone	: N.E. Zone	Sub Dn.	: PESD Ambala

PERCENTAGE RATE TENDER & CONTRACT FOR WORKS

(A) *Tender or the work of:-*
Electrical repair and maintenance work for ground floor at Sector-7 Post Office building, Faridabad (HR).

i)To be submitted through e-tendering by 25.05.2026 up to 15:00 Hoursto Executive Engineer (Electrical)Postal Electrical Division, New Delhi.

ii)To be opened through e-tendering in Presence of tenderers who may be present on26.05.2026 up to 15:00 Hoursin the office of the Executive Engineer (Electrical) Postal Electrical Division New Delhi.

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, 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 and with such materials as are provided for, by, and in respect of accordance with, such conditions so far as applicable.

I/We agree to keep the tender open for Seventy Five (75) days from the date of opening of tender thereof and not to make any modifications in its terms and conditions.

A copy of earnest money deposit receipt of prescribed amount deposited in the form of Insurance Surety Bonds, Account Payee Demand Draft, Fixed Deposit Receipt, Banker's Cheque or Bank Guarantee (as prescribed) issued by a Commercial Bank, is scanned and uploaded (strike out as the case may be). 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 to 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 performance guarantee absolutely. The said Performance Guarantee shall be a guarantee 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 limit at the rates to be determined in accordance with the provision contained in Clause 12.2 and 12.3 of the tender form..

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

I/We undertake and confirm that eligible similar work(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 for tendering in DOP 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/We am/are authorized to communicate the same or use the information in any manner prejudicial to the safety & integrity of the State

Dated :.....

Signatures of Contractor
Postal Address

Witness :

Address :

Occupation :

ACCEPTANCE

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

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

i)

ii)

iii)

Signatures:.....
Designation:.....

Dated :.....

For & on behalf of the President of India

SCHEDULES

Schedule 'A'- Schedule of Quantities, (BoQ_XXXXX.xls file on the website against this work items)

Schedule 'D'-

Extra schedule for specified requirements/ documents for condition & anyparticulars specifications as attached.

(i) General conditions and additional the work, if

(ii) Schedule of quantities as per BoQ_XXXXX.xls file.

Schedule 'E'-

Reference to general conditions of contract GCC for CPWD Works-2023 with amendment issued by CPWD up to date of issue of NIT.

Name of work-Electrical repair and maintenance work for ground floor at Sector-7 Post Office building, Faridabad (HR).

i)	Estimated cost of work	:	₹807116/-
ii)	Earnest money	:	₹16142/-(to be returned after receiving performance guarantee)
iii)	Performance Guarantee	:	5% of tendered value
iv)	Security Deposit	:	2.5% of tendered value

Schedule 'F'-

General Rules & Directions:

Officer Inviting tender: Executive Engineer (E), Postal Electrical Division, New Delhi.

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:

i)	Engineer-in-charge	Executive Engineer (E), Postal Electrical Division, New Delhi
ii)	Accepting Authority	Executive Engineer (E), Postal Electrical Division, New Delhi
iii)	Percentage on cost of materials and labour to cover all over-heads and profits.	15%
iv)	Standard schedule of Rates	DSR- 2022/25
v)	Department	Department of Posts

vi) Standard CPWD contract Form CPWD form 7 as modified & corrected up to date correction slip and General conditions.

Clause 1

i. Time allowed for submission of Performance Guarantee, program chart (Time and progress) and applicable labour licenses, registration with EPFO, ESIC and BOCW welfare board or proof of applying thereof from the date of issue of letter of acceptance 07 Days

ii. Maximum allowable extension with late fee @ 0.1% per day of Performance Guarantee amount beyond the period provided in (i) above in days — 07 Days

Clause 2

Authority for fixing compensation under clause 2 — S.E. (E), PEC, New Delhi.

Clause 2A

Whether Clause 2A shall be applicable: — No

Clause 5

Number of days from the date of issue of letter of acceptance for reckoning date of start — 10 Days

Table of milestones

S.No.	Financial progress	Time allowed (From date of start)	Amount to be with-held in case of non-achievement of milestone
1	1/8th (of which work)	1/4th (of whole work)	In case of not achieving the necessary progress, 1% of the tendered value of work will be withheld for failure of each milestone
2.	3/8th (of which work)	1/2th (of whole work)	
3.	3/4th (of which work)	3/4th (of whole work)	
4.	Full	Full	

Time allowed for execution of work — 60Days

Authority to decide:

- Extension of time — Engineer in charge
- Rescheduling of mile stones — S.E. (E), PEC, New Delhi
- Shifting of date of start in case of delay in handing over of site — S.E. (E), PEC, New Delhi
- Authority to give fair and reasonable extension of time for completion of work. — S.E. (E), PEC, New Delhi.

PROFORMA OF SCHEDULES Clause 5 Schedule of handing over of site

Part	Portion of Site	Description	Time period for handing over reckoned from date of issue of letter of intent
Part A	Portion without any hindrance		10 Days
Part B	Portions with encumbrances		
Part C	Portions dependent on work of other agencies		

Clause 6

Measure Book (MB) /Computerized Measure Book (CMB) /Electronic Measurement Book (EMB) Mode of measurement : — MB/CMB

Clause 7

Gross work to be done together with net payment/adjustment — Rs.50,000/-

of advances for material collected, if any, since the last such Payment for being eligible to interim payment.

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

Clause 10 B(ii)
Whether clause 10 B(ii) shall be applicable No

Clause 10C
Component of labour expressed as percentage of value of work: 20 %

Clause 10 CC
Clause 10 CC to be applicable in contracts with stipulated period of completion exceeding the period shown in next column. NA.

Clause 11
Specification to be followed for execution of work: CPWD specifications for Electrical work Part-I Internal Part-II External as amended up to date and specifications mentioned in this NIT.

Clause 12

12.2 &12.3	Deviation limit beyond which clauses 12.2 & 12.3 shall apply for building work.	50%
	Deviation limit beyond which clauses 12.2 & 12.3 shall apply for foundation work.	NA

Clause 16
Competent Authority for deciding reduced rates. E.E. (E), PED, New Delhi

Clause 18
List of mandatory machinery, tools & plants to be deployed by the contractor at site NA

Clause 19C
Authority to decide penalty for each default E.E.(E.)
Clause 19D
Authority to decide penalty for each default E.E.(E.)
Clause 19G
Authority to decide penalty for each default E.E.(E.)
Clause 19K
Authority to decide penalty for each default E.E.(E.)

Clause 25

i.	Conciliator:	Chief Engineer (Electrical)
ii.	Arbitrator Appointing Authority:	S.E.(E.)
iii.	Place of Arbitration:	New Delhi

Clause 32

Sl No.	Minimum qualification of	Discipline	Designation	Minimum	Number	Rate at which recovery shall be made from the contractor in the

	Technical Representative		(Principal Technical/Technical representative			event of not fulfilling provision of clause 36(i)	
						Figures	Words
1.	Graduate Engineer	Elect. Engg	Principal Technical	3 Years	--	₹15000/- per month	₹Fifteen thousand per month
2.	Diploma Holder	Elect. Engg	Technical representative	3 Years	--	₹10000/- per month	₹Ten 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 38

i)	Schedule/ statement for determining theoretical quantity of cement & bitumen on the basis of Delhi Schedule of Rates 2023/25 printed by CPWD.	NA
ii)	Variation permissible on theoretical quantities.	NA
a)	Cement for works with estimated cost put to tender not more than ₹ 5 lakhs	3% plus / minus
	for works with estimated cost put to tender more than ₹ 5 lakhs.	2% plus / minus
b)	Bitumen for all works	2.5% plus only & nil on minus
c)	Steel Reinforcement and structural steel sections for each diameter, section and category.	2% plus / minus
e)	All other materials.	NIL

Integrity Pact and Provision of Independent External Monitors (IEMs)

Applicable when EC is more than Rs.3 Crores

CORRECTION SLIP

(Correction to form CPWD- 6 & 7/ 8 (2008)
(For use in Department of Posts, India)

Correction to: Definition under "Conditions of Contract" all reference to:-

i) Director General of works, CPWD
ii) CPWD/ Public Works Department
iii) Administrative Head of CPWD
iv) Chief Engineer CPWD
v) CPWD Circle&
vi) Ministry of Urban Development.

In various clauses shall be taken to mean:-

i) Chief Engineer (E), Department of Posts
ii) Department of Posts/ Civil Wing.
iii) Administrative Head of Department of Posts
iv) Chief Engineer (E), Department of Posts
v) Postal Electrical Circle/ Zone &
vi) Ministry of Communication, Department of Posts

Except in: In the following places and clauses where no modifications are intended:-

i) CPWD safety code
ii) Clause 11, 12, 19 B (1), 19 B (III), 19 B (IV), 19 C & 19 G.
iii) Model rules for protection of health and sanitary arrangement for workers employed by CPWD or its contractors (Heading only).
iv) Central Public works Department Contractor's Labour Regulation (In heading and Regulations No.1 only),
v) CPWD- Delhi Schedule of Rates and Specifications.

Contractor Engineer-in-charge.

GENERAL TERMS AND CONDITIONS APPLICABLE FOR ALL E&M COMPONENTS

1. GENERAL

1.1 The work shall be generally carried out in accordance with tender/bid specifications and the following specifications / rules with up-to-date amendments.

a) CPWD General Specifications for Electrical work Part I Internal – 2023, as amended up to date

b) CPWD General Specifications for Electrical work Part II External– 2023, as amended up to date

c) CPWD General Specifications for Electrical work Part III (Lifts), as amended up to date

d) CPWD General Specifications for Electrical work Part IV (Substation) as amended Up to date

e) CPWD General Specifications for Electrical work Part V (Wet Riser & Sprinkler System) as amended up to date.

f) CPWD General Specifications Part-VI: Fire Alarm System as amended up to date.

g) CPWD General Specifications Part-VII (D.G Sets) as amended up to date.

h) CPWD General Specifications -2024 for HVAC Works as amended up to date.

i) Commercial and Additional conditions for this work.

j) The Indian Electricity Act, 2003, as amended up to date.

k) Indian Electricity Rules 1956 amended up to date.

1.2 **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) Description of Schedule of quantities.

b) Commercial and Additional conditions for this work.

c) Drawings.

d) CPWD General Specifications of that particular work.

e) Relevant IS or any other international code in case IS code is not available.

Commercial and Additional conditions of that particular work are to be read in conjunction with above and in case of variations, specifications given in these additional conditions shall apply. However, nothing extra shall be paid on account of these additional specifications and conditions, as the same are to be read along with schedule of quantities for the work.

1.3 This specification covers manufacture, testing as may be necessary before dispatch, delivery at site, all preparatory work, assembly and installation, commissioning putting into operation of equipment of all E&M components of the tender.

1.4 The tenderer should in his own interest visit the site and get familiarize with the site conditions before tendering.

1.5 No T&P shall be issued by the Department and nothing extra shall be paid on account

of this.

2. COMMERCIAL CONDITIONS

Type of Contract: The work to be awarded by this tender shall be treated as indivisible works contract.

Income tax, GST, labour cess& other statutory deductions etc. shall be made at source as per the prevalent laws. The deductions of Security Deposit, Income-Tax etc. shall be done as applicable on the gross payments and net payment shall be paid accordingly.

3. RATES

The rates quoted by the tenderer shall be firm and inclusive of all taxes (including GST, labour cess etc.,). and all charges for packing forwarding, insurance, freight and delivery, installation, testing, commissioning etc. at site including temporary construction of storage, risks, overhead charges, general liabilities/obligations and clearance from CEA. However, the fee for the CEA inspections shall be reimbursed/ borne by the department. EPF & ESI contributions are to be made by the contractor. The department will not issue Octroy exemption certificate.

4. DEFECT LAIBILITY PERIOD

4.1 The contractor has to carry out maintenance as per CPWD General Specifications / manufacturer's standards for a period of **12 months** or as decided by the Engineer – in – Charge from the date of handing over. Nothing extra shall be paid on this account.

4.2 In case of Specialized E&M works if Engineer-in-charge desires, the tenderer should submit the following documents from OEM for that particular minor component

a) Authorization certificate.

b) The OEM is unconditionally supporting the lowest tenderer technically throughout the execution of contract as well as for Maintenance/Comprehensive Maintenance Contract for the useful life of the system, and

c) OEM is providing all the spares required for the healthy functioning of the equipment for at least seven years from the date of supply of equipment.

4.3 In case the same item appears more than once in the schedule of work under the same subhead or among the different subhead of works, the lowest rate quoted for that item elsewhere shall be considered for other items also during evaluation of tender.

5. 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.

6. STORAGE AND CUSTODY OF MATERIALS

The agency has to make his own arrangements. No storage accommodation shall be provided by the department. Watch and ward of the stores and their safe custody shall be the responsibility of the contractor till the final taking over of the installation by the department/client.

7. CARE OF THE BUILDING:

Care shall be taken by the contractor while handling and installing the various equipments 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.

8. COMPLETION PERIOD

The completion period indicated in the tender documents is for the entire work of planning, designing, approval of drawings etc., arrangement of materials &equipments, delivery at site including transportation, installation, testing, commissioning and handing over of the entire system to the satisfaction of the Engineer-in-charge.

9. GUARANTEE

9.1 All equipments shall be guaranteed for a period of 12 months (except LED fittings which shall be guaranteed for minimum 5 years), from the date of taking over the installation by the department, against unsatisfactory performance and/or break down due to defective design, workmanship or material. The equipments or components, or any part thereof, so found defective during guarantee period shall be repaired or replaced free of cost, to the satisfaction of the Engineer-in Charge. In case it is felt by the department that undue delay is being caused by the contractor in doing this, the same will be got done by the department at the risk and cost of the contractor. The decision of the Engineer-in-charge in this regard shall be final & binding on the contractor.

9.2 The tender shall guarantee among other things, the following:

a) Quality, strength and performance of the materials used as per manufacturers standards.
b) Safe mechanical and electrical stress on all parts under all specified conditions of operation. Satisfactory operation during the maintenance period.

10. **POWER SUPPLY:**

The contractor has to make its own arrangement for power supply required for execution of the work.

11. WATER SUPPLY:

The contractor has to make its own arrangement for water supply required for execution of the work.

12. ACCEPTABLE MAKES OF VARIOUS EQUIPMENTS:

The acceptable makes of various equipments/components/accessories have been indicated in "Acceptable Makes" appended with the tender documents. The tenderer shall work out the cost of the offer on this basis. Alternate makes are not acceptable.

13. DATA MANUAL AND DRAWINGS TO BE FURNISHED BY THE TENDERER:
After the award of work

The successful tenderer would be required to submit the following drawings after award of work for approval as per milestones of tender.

a) General arrangement drawing, including detailed shop drawings of all E&M components, conduit size and route layout, Panel Drawing, Light Fitting Distribution Drawing, Fire Alarm and Fire Fighting Layout, VRF AC Distribution Layout and other drawings of all E&M components to be submitted by the agency well in advance to get the approval from the JE(E)/AE(E)/EE (E) and care shall be taken not to avoid any delay in the slab casting for all individual E&M component.
a) Details of foundations for the equipment and the weights of assembled equipments.
b) Any other drawings necessary for the job.
c) Reflected Ceiling Plan (RCP) for all floors by incorporating all equipments likely to come in ceiling/false ceiling shall be submitted for approval before casting of slabs by considering all E&M components.

14. The successful tenderer should furnish well in advance of start of work, three copies of detailed instructions and manufacturer's manuals of all equipments regarding installation,

operation and maintenance, preventive maintenance & trouble shooting with all the relevant data sheets, spare parts catalogue, etc.

15. EXTENT OF WORK

15.1 The work shall comprise of entire labour including supervision, all materials necessary to make a complete installation, tests and adjustments and commissioning, as may be required by the department. The term complete installation shall not only mean major items of the plant and equipments covered by specifications but all incidental sundry components necessary for complete execution and satisfactory performance of installation with all layout charts whether or not mentioned in details in the tender document in connection with this contract as this is a turnkey job.

15.2 The cables and all other items shall be brought to site only after taking correct measurements as per actual requirement of work. Excess quantities shall not be accepted and paid. i.e., Quantity of item brought to site and used in work as per actual requirement shall only be measured and paid irrespective of quantities of BOQ / work schedule. **The item brought to the site and paid, if not used in the project have to be taken back by the contractor and deductions in the payment shall be adjusted in subsequent bills.** The decision of the Engineer-in-charge in this regard shall be final & binding on the contractor.

15.3 In addition to supply, installation, testing and commissioning, of all E&M equipment, the following works shall be deemed to be included within the scope of work to be executed by the tenderer.

a) Minor building works necessary for installation of equipments, foundation, making of opening in walls or in floors and restoring them to their original condition finish and necessary grouting etc. as required.

b) All necessary support may be arranged.

c) Testing of PTs/CTs for metering & protection purpose & relay calibration & setting.

d) Getting inspection done & obtaining approval from Central Electrical Authority and local fire authority for energizing the installation. However, necessary fees for inspection shall be borne by the Department.

16. Exclusion and work to be done by other agencies:

The following shall be excluded from the scope of the work:

a) Major dismantling of any existing building work.

17. INSPECTION AND TESTING

17.1 All major equipments like Transformers/DG sets/LT panels/HT panels/HVAC Equipments/Lifts etc. (as per the guidelines of **Quality Assurance Policy & Check List of E & M Services of CPWD/specifications)** shall be offered for initial inspection contractor will intimate the date of testing of equipments at the manufacturer's works before dispatch. The successful tenderer shall give advance notice of minimum two weeks regarding the dates proposed for such tests to the department's representative to facilitate his presence during testing.

The Engineer-in-charge or his representative may witness such testing. The cost of the Engineer's visit to the factory will be borne by the Department. Equipments will be inspected at the manufacturer/ Authorized Dealers premises, before dispatch to the site by the contractor if so desired by the Engineer-in-charge. Engineer-in-charge at his discretion may waive off inspection at factory /at the manufacturer's works before dispatch.

17.2 Copies of all documents of routine and type test certificates of the equipment, carried out at the Manufacture's premises shall be furnished to the Engineer-in-charge. The

decision of the Engineer-in-charge in this regard shall be final & binding on the contractor.

17.3 After completion of the work in all respects the contractor shall offer the installation for testing and operation. The contractor should submit all the related documents of completed E&M equipment to the department for further handing over to client department.

18. COMPLIANCE WITH REGULATIONS AND INDIAN STANDARDS

18.1 All works shall be carried out in accordance with relevant regulation, both statutory and those specified by the Indian Standards related to the works covered by this specification.

In particular, the equipment and installation will comply with the following:

i) Factories Act.
ii) Indian Electricity Rules.
iii) B.I.S. & other standards as applicable.
iv) Statutory norms prescribed by local bodies like CEA, Power Supply Co., Fire authorities, etc.

18.2 After completion of the installation, the same shall be offered for inspection by the representatives of the Central Electricity Authority if required and local fire authority. The contractor will extend all help including test facilities to the representatives of CEA/Local fire authority. The observations of CEA/Local fire authority will be attended to by the contractor. The installation will be commissioned only after getting clearance from CEA/Local fire authority. The contractor should get inspection done & obtain approval from Central electrical Authority and local fire authority.

18.3 Nothing in this specification shall be construed to relieve the successful tenderer of his responsibility for the design, manufacture and installation of the equipment with all accessories in accordance with currently applicable statutory regulations and safety codes.

19. INDEMNITY:

The successful tenderer shall at all times indemnify the department. Consequent on this works contract, the successful tenderer shall be liable, in accordance with the Indian Law and Regulations for any accident occurring due to any cause and the contractor shall be responsible for any accident or damage incurred or claims arising there during the period of erection, construction and putting into operation the equipments and ancillary equipment under the supervision of the successful tenderer to the extent the latter is responsible. The successful tenderer shall also provide all insurance including third party insurance as may be necessary to cover the risk. No extra payment would be made to the successful tenderer on account of the above.

20. ERECTION TOOLS:

No tools and tackles either for unloading or for shifting the equipments for erection purposes would be made available by the department. The successful tenderer shall make his own arrangement for all these facilities.

21. COOPERATION WITH OTHER AGENCIES:

The successful tenderer shall co-ordinate with other contractors and agencies engaged in the construction of buildings, if any, and exchange freely all technical information so as to make the execution of this work/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 completed portion of the work has to be dismantled and re-done for want of cooperation and coordination by the 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 tenderer himself.

The work will be carried out with least disturbance during shifting & shut down taken in consultation with the client department.

22. INSURANCE AND STORAGE:

All consignments are to be duly insured upto the destination from warehouse at the cost of the contractor. The insurance covers shall be valid till the equipment is handed over duly installed, tested and commissioned.

23. VERIFICATION OF CORRECTNESS OF EQUIPMENT AT DESTINATION:

The contractor shall have to produce all the relevant records to certify that the genuine equipments from the manufacturers has been supplied and erected to the satisfaction of the Engineer-in-charge.

24. PAINTING:

This shall include cost of painting of the entire installation. The major equipments like HT panel, transformers, L T panel, bus duct, cable trays, HVAC equipment, etc. shall be factory final finish painted. The agency shall be required to do only touching to the damages caused to the painting during transportation, handling & installation at site, if there is no major damage to the painting. However, hangers, supports etc. of bus trunking& cable tray etc. shall be painted with required shade including painting with two coats of anticorrosive primer paint at site.

25. TRAINING:

The scope of works includes the on job technical training of two persons of Department at site as decided by Engineer – in - charge. Nothing extra shall be payable on this account.

26. MAINTENANCE:

Sufficient trained and experienced staff shall be made available to meet any exigency of work during the guarantee period of two years from the handing over of the installation.

The maintenance, routine as well as preventive, for two years from the date of taking over the installation as per manufacturer's recommendation.

27. Approval of drawings, makes and models of equipment/materials for all E&M components:

27.1 The agency shall submit drawings and details such as makes and models of the equipments/materials offered by him along with specifications for all E&M components to the Engineer-in-charge of the work, before ordering the equipment/materials for approval of the department.

27.2 The Engineer-in-charge shall scrutinize the proposal and approve the makes and models which are acceptable as per the schedule, specifications, conditions of the agreement and inform the agency for procurement.

27.3 After approval of the equipment/materials by the department the agency shall procure the equipment/materials from the OEM/authorized distributor/dealer as the case may be.

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

i. Material will be ordered & delivered at site only with the prior approval of the department to ensure timely delivery.

i. As and when the order is placed for the fittings/ fixtures, cables, switchgears, poles, other main items etc, its copy shall be endorsed to the Engineer-in-charge of work.

ii. The contractor will submit makes & brands of electrical fittings wires & cables, conduits and switchgears, rising mains, poles, outdoor fittings etc. of preferred make list as per tender documents for approval of Engineer-In-Charge, whose decision will be final in the matter.

iii. The firm will be required to procure material directly from the manufacturer/ authorized dealers to ensure genuineness & quality and as per the approved makes only. Proof in this regard shall be submitted by the contractor if required by the department.

iv. Inspection at factory or at godown, as required, shall be arranged by the firm for a mutually agreed date.

v. Delivery of material shall be taken up only with the consent of department, after clearance of the material.

vi. Department shall reserve the right to waive off inspection in lieu of suitable test certificate, at its discretion.

vii. All the materials to be supplied by the contractor shall be procured & brought to site as per requirement at site of work in consultation with department so that these materials are not damaged & their manufacturer's warrantee.

29. Safety Codes & Statutory Regulations:

a. Nothing in this specification shall be construed to relieve the successful tenderer of his responsibility for the design, manufacture and installation of the equipment with all accessories in accordance with currently applicable statutory regulations and safety codes.

a. Successful tenderer shall arrange for compliance with statutory provisions of safety regulations and departmental requirements of safety codes in respect of labour employed on the work by the tenderer. Failure to provide such safety requirement would make the tenderer liable for penalty of Rs.1000/- for each default. In addition, the department will be at liberty to make arrangement for the safety requirements at the cost of tenderer and recover the cost thereof from him.

30. ADDITIONAL CONDITIONS AND SPECIFICATIONS

1. The work shall be done as per current CPWD General Specifications for Electrical Works as amended from time to time; and in accordance with the provisions of Electricity Act, 2003; and Central Electricity Authority (Measures Related to Safety and Electric Supply) Regulations as amended up to date.

1. The work shall be supervised by a qualified overseer/supervisor and the contractor will have to submit the credentials of the overseer/supervisor before he will be allowed to work at the site.

2. The layout of the work will be given by the Engineer-in-charge or his authorized representative at site of work.

3. The earthing sets shall be provided in the presence of the Engineer-in-charge or his authorized representative failing which the contractor will have to do that earthing in the presence of the Engineer-in-charge or his authorized representative.

4. The bidder should submit along with the tender, the make of materials to be used in the work whenever not specified in the schedule. Unapproved materials, if used on the work, shall have to be removed immediately at the cost and risk of contractor.

5. The successful contractor should recess the conduit in the walls before they are plastered and will have to take special care so that the conduit do not pass through air-conditioning grills, collar beams etc. Any damage thus done will have to be made good at cost of the contractor.

6. The runs of various circuits wiring at various places shall be kept minimum by the runs on walls where crossing of columns is not necessary. This has to be decided before the costing of slab so that unnecessary lengths of conduit are not laid there in.

7. Completion Plan and Completion Certificate: The contractor will have to submit the completion plan drawn to a suitable scale in tracing cloth with ink or computerized drawing, in triplicate along with completion certificate. In case the contractor fails to submit completion plan and completion certificate as aforesaid he shall be liable to pay a sum equivalent to 2.5% of the value of the work subject to a ceiling of ₹ 7,500/-.

8. Inspection of Material and Equipment: Department reserves the right to inspect the material at manufacturer's premises or at authorized dealer's godown.

9. Underground cable both of 1.1 kV and 11 kV grade should be subjected to insulation test before and after laying the same in the duct and in case of unsatisfactory test results, the cost of all repairs and replacement and all extra work for removal and relaying will have to be made by the contractor at his own cost and risk.

10. Termination of all connections on main board sub boards/sub distribution boards will be done by contractor and nothing extra will be paid on this account.

ADDITIONAL, COMMERCIAL & TECHNICAL CONDITIONS FOR IEI & Fans

1. General:

The work shall be generally carried out in accordance with schedule of quantities and the following specifications and conditions.

a) CPWD General Specifications for Electrical work Part II External – 2023, as amended up to date.
b) CPWD General Specifications for Electrical work Part I Internal – 2023, as amended up to date.
c) Commercial and Additional conditions for this work.
d) The Indian Electricity Act, 2003 as amended up to date.
e) Indian Electricity Rules 1956 amended up to date.

2. Guarantee & Defect Liability Period:

All equipment shall be guaranteed for a period of **12 months** from the date of taking over the installation by the department, against any unsatisfactory performance and/or breakdown due to defective design, workmanship, or materials. However, LED fittings shall carry a minimum guarantee of 5 years, while ceiling fans, pumps, and motors shall be guaranteed for a period of 1 years. The equipments or components, or any part thereof, so found defective during guarantee period shall be forthwith repaired or replaced free of cost, to the satisfaction of the Engineer-in Charge. In case it is felt by the department that undue delay is being caused by the contractor in doing this, the same will be got done by the department at the risk and cost of the contractor. The decision of the Engineer-in-charge in this regard shall be final & binding on the contractor.

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.

i) Ceiling fans, Exhaust fans, Pumps, Motors are to be guaranteed for 1(one) Years.
ii) LED fittings are to be guaranteed for 5 years.
iii) Data and Programme to be furnished by the tenderers:

General arrangement drawing (including detailed shop drawings) of all conduit route layout for all related E&M components to be submitted by the agency well in advance to get the approval from the competent authority and care shall be taken not to avoid any delay in the slab casting for all individual E&M components.

The Contractor shall prepare the programme chart for the execution of the work showing clearly all activities from the start of work to the completion required for the completion of the work within the stipulated period and submit the same to the Engineer-in-Charge within fifteen days after the issue of letter for commencement of the work. The Contractor shall also submit monthly programme and progress reports and update / re-schedule the same every month. These shall be submitted by the contractor in soft copy also besides forwarding hard copy of the same.

iv) **Extent of work:**

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.

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.

v) Verification of correctness of material at Destination:

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

~~**3.** The main contractor shall also enter into an Affidavit of 'Memorandum of understanding' with the approved associated contractor on Non-Judicial Stamp Paper as per the enclosed proforma and submit this 'MOU' duly completed (duly signed by him and the associated Contractor) before commencement of work.~~

~~**4.** Executive Engineer (Elect.) shall be the Engineer-in-Charge as far as E & M works are concerned. A separate tender form for E & M component is appended with this tender. It will be obligatory on the part of the main contractor to sign the tender documents for all the components.~~

~~**5.** The main agency shall be responsible for all acts of omissions and submissions of the Associated Contractor engaged by him, even with the approval of the department.~~

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

7. The contractor has to make his own arrangements for stores and watch and ward and no extra claim for this will be entertained.

~~**8.** Running payment for Electrical/Mechanical components shall be made 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.~~

9. <u>Payments terms:</u>

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 not exceeding the percentage indicated against the stages of work.

a) Items connected with point wiring, circuit wiring, sub-main wiring, power point wiring and light plug wiring.

S. No.	Stage of work	Percentage of Rate
A	On laying of conduits with accessories, switch boxes, etc.	35%
B	On drawing of wires i/c terminations, switches, sockets, cover plates etc.	50%
C	On completion of item and after testing and commissioning.	10%
D	At the time of payment of final bill	5%

b) Items of Rising mains, Distribution Boards, MCBs, RCBOs, LED fittings, fans, Water coolers, MV Panels, Earthing materials, Lightning conductor materials, Split AC's, Illuminated sign boards, pumps, pump panel, street light panel, HDPE pipes and lift

cables etc.

S. No.	Stage of work	Percentage of Rate
A	On initial inspection of material and delivery at site in good condition on pro-rata basis.	35%
B	On completion of installation on pro-rata basis.	50%
C	On completion of item and after testing and commissioning.	10%
D	At the time of payment of final bill	5%

For other items, the part rates will be decided by the Engineer-In-Charge of the work and shall be binding on the contractor.

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

11. The ~~main~~ contractor and / ~~or his Associated 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.

12. The contractor shall make his own arrangement at his own cost for electrical / General Tools and plants required for the work.

13. The connections, inter-connections, earthing and loop 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.

14. The contractor must be able to work on concrete slabs / walls as and when required and in complete coordination 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.

15. The contractor shall remove all the debris due to the E & M works from the site as soon as the work is completed.

16. The wiring and conduit route shall be marked by the contractor in the drawing first, and shall be got approved from the Engineer-in-charge.

17. The rupturing capacity of the MCBs shall be 10 KA minimum. The MCBs shall have ISI mark. Quantities of MCBs of different rating of 6 amps to 32 amps shall be brought in consultation with the Engineer-in-Charge or his representative.

18. All the MCCBs shall be rated for Ics only, as specified.

19. The copper wire to be used on this work shall be FRLS type and ISI marked.

20.

a) The make of switch boxes shall be the same as that of switches. Only the required knockouts of the switch boxes are to be removed for terminating the conduit pipes with PVC glands / check nuts.

b) Make of MCB/MCCB shall be the same as the make of MCB DB.

c) All the switch boxes, MCBDBs are to be covered with plastic sheet / petroleum gelly when installed in brick work till the plastering / painting is done to avoid sticking of cement plaster/ splashes of the paint. Cement plaster / paint are to be cleaned immediately after plaster to avoid rusting of switch boxes and MCB DBs. The plastic sheet is to be removed at the time of handing over.

d) If two module sockets are used, one blanking plate is to be fixed by the side of socket to avoid interference of larger size plug to PS. Nothing will be paid extra for

blanking plate.

e) Power and light MCB distribution boards in office/ non-residential buildings should be of same size irrespective of number of circuits as far as possible in order to get aesthetic look.

21. The E & M works shall be carried out by the contractor, along with the progress of the civil works.

22. The Contractor shall furnish documentary proof like delivery challans of purchasing Wires, Modular switches & accessories, MCBs, MCBDB, Fittings, accessories and other items from the manufacturers or their authorized dealers to the satisfaction of the Engineer-in-charge.

23. All PVC conduits accessories shall be of the same make as conduits. The Conduits shall be terminated at switch boxes/metallic junction boxes with suitable PVC glands/check nuts.

24. 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.

25. All the sub main and circuit wiring includes loose wire for connections inside switch boxes and MCBDBs. 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.

All the circuits / sub-main wiring are to be suitably numbered with stickers / marker pen at LT panel, MCBDBs, switch boards (on backside of cover plate) for ease of maintenance. Nothing shall be paid extra on this account.

26. The contractor shall submit the completion plan separately in triplicate on blueprint/ computer plotted as per Clause-8 of the contract within 30 days of the completion of work. In case the contractor fails to submit the plan as aforesaid, he shall be liable to pay a sum equivalent to 2.5% of the value of the work subject to a ceiling of Rs. 15,000/- (Rupees Fifteen Thousand Only) or limit prescribed in Schedule-F, 'whichever is more' as may be fixed by the Engineer-in-charge concerned and in this respect the decision of the Accepting Authority is final & binding on the contractor.

27. To facilitate drawing of wires, 18 SWG GI fish wires shall be provided along with laying of recessed conduit for which no extra payment shall be made. Conducts laid for other services, like fire alarm, PA etc., where wiring is not done along with IEI works, fish wire shall be invariably drawn.

28. The connection between incoming switch / isolator and bus bar shall be made with suitable size of thimble and cable at no extra cost.

29. Copper conductor of insulated cables of size 1.5 Sq.mm and above shall be stranded and terminals provided with crimped lugs.

30. All MS junction box cover should be of phenolic laminated / good quality plastic sheet of thickness not less than 3mm and for which nothing extra shall be paid on the account.

31. All sub-main wiring shall be terminated in the main board with suitable copper lugs and thimbles for which nothing extra will be paid on this account.

32. The rising main shall comprise of sheet metal enclosure, bus bars, tap-off points, tap-off boxes, end feed units, fire barriers, expansion joints, thrust pads, end covers and fixing brackets etc.

33. The rising main shall conform to IS/IEC 61439-1 2011 and IS/ IS/IEC 61439: Part 6: 2012 and shall be suitable for 415 V, 3 phase, 50 Hz supply and insulation of rising mains shall be capable of withstanding the voltage of 660-volt AC. Degree of

IP protection and short circuit rating shall be specified.

34. Tap-off arrangements shall be provided on the rising mains with tap-off boxes.

35. 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.

36. All hardware items such as nuts/ bolts/ screws/ washers etc. to be used in work shall be zinc/ cadmium plated iron.

37. 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.

38. While laying conduit, suitable size junction boxes shall be provided for pulling the wire as per the decision of the E-in-C.

39. The make of the materials has been indicated in the list of acceptable makes. No other makes will be acceptable. 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.

40. Where switches/ sockets/ regulator/ telephone/ TV / internet outlets including metal boxes are to be provided, the same shall be of only one make.

41. While laying conduits for fire alarm system, sufficient junction outlets are to be provided as per the direction of the Engineer-in-Charge for detectors as required, for which no extra payment shall be made.

42. Wherever light fittings are proposed to be provided on the false ceiling, the respective light / fan point wiring will have to be brought up to the terminal of the light fittings / fans by the contractor. Flexible metal conduits shall be used for drawing wires from PVC conduits on ceiling to fittings on false ceiling and nothing extra shall be paid to the contractor for the same. The height from false ceiling to ceiling is about 1.2 meters or as per site conditions. The switchboards are to be fixed at heights in all locations in accordance with CPWD specifications / as per the directions given by the Engineer-in-charge.

43. After installation, all accessible surfaces of metallic accessories shall be painted.

44. For circuit/sub-main/point wiring of copper conductor cables shall be terminated on the ends with lugs/thimbles.

TECHNICAL SPECIFICATIONS OF MV / LT PANELS

45. Scope

This Section covers the detailed requirements of medium voltage switch Panel for 433V, 3 phase 50 Hz 4 wire system. All switchgears shall be fully rated at an ambient of 40° C.

46. Type of Panel

The medium voltage switch board panel shall comprise of anyone of the following types of switchgears or combination thereof as specified.

a) Air Circuit breakers shall be draw out type.

b) MCCBs of suitable Ics ratings. MCCBs shall invariably be Current Limiting type. Features like Double Break, Positive Isolation functions shall be preferred.

The Panel shall be indoor /outdoor type having incoming sectionalization and outgoing switchgears as specified. The design shall be cubical type. The degree of enclosure

protection shall be **IP** 42 for indoor and IP 54 for outdoor panels as per IS: 13947 (Part-I).

47. M. V. Panel

47.1 General Construction

The switchboard shall be floor mounted free standing totally enclosed and extensible type. The switch board shall be dust & vermin proof and shall be suitable for the climate conditions as specified. The design shall include all provisions for safety of operation and maintenance personnel. The general construction shall conform to IS: 8623/1993 for factory assembled switch board.

47.2 Cubicle Type Panels

47.2.1 Cubical type panels shall be fabricated out of sheet steel not less than 2.0 mm thick. Wherever necessary, such sheet steel members shall be stiffened by angle iron frame work. General construction shall employ the principle of compartmentalization and segregation for each circuit. Unless otherwise approved, incomer and bus section panels or sections shall be separate and independent and shall not be mixed with sections required for feeders. Each section of the rear accessible type panel shall have hinged access doors at the rear. Overall height of the panel shall not exceed 2.4 meters. Operating levers, handle etc. of highest unit shall not be higher than 1.7 meters.

Multi-tier mounting of feeder is permissible. The general arrangement for multi-tier construction shall be such that the horizontal tiers formed present a pleasing and aesthetic look. The general arrangement shall be approved before fabrication. Cable entries for various feeders shall be either from top or bottom. Through cable alleys located in between two circuit sections, either in the rear or in the front of the panel. All cable terminations shall be through gland plates. There shall be separate gland plate for each cable entry so that there will not be dislocation of already wired circuits when new feeders are added. Cable entry plates shall therefore be sectionalized. The construction shall include necessary cable supports for clamping the cable in the cable alley or rear cable chamber.

Cubicle panels with more than 1000 Amps BUS shall be made of tested structural modular sections.

47.2.2 Bus Bar and Connections

The bus bars shall be of copper of high conductivity electrolytic quality and of adequate section. Current density shall not exceed 160 amps for copper /sq. cm. The bus bar system may comprise of a system of main horizontal bus bars and ancillary vertical bus bars run in bus bar alleys on either side of which the circuit could be arranged with front access cable entries. In the case of rear access, horizontal bus system shall run suitably either at the top or bottom. All connections to individual circuits from the bus bar shall preferably be solid connections; however flexible connections shall also be permitted as per recommendations of the Panel Manufacturer. All bus bars and connections shall be suitably sleeved / insulated in approved manner.
Busbar should be 100% Neutral

47.2.3 Incomer / Termination

Incomer termination shall be suitable for receiving bus trucking / underground cables. Cable terminations shall invariably be through terminal blocks (Polyamide or superior) or brought out solid terminals.

47.2.4 Instruments

All voltmeters, ammeters and Multi-function meters shall be flush mounted as specified in schedule of work, conforming to class 1.5 of IS:1248 for accuracy. All meters shall be protected with MCB

47.2.5 Indicating Lamps

On all the incomers of M.V panels, ON/OFF indicating LED lamps shall be provided and shall be suitable for operation on AC supply.

47.2.6 Small Wiring

All small wiring for Controls, Indication etc. shall be of with suitable FRLS/HFFR (halogen free fire retardant) copper conductor cables. Wiring shall be suitably protected within switch board. Runs of wires shall be neatly bunched, suitably supported and clamped. Means shall be provided for easy identifications of the wires. Where wires are drawn through steel conduits, the works shall conform to CPWD General Specifications for Electrical works (Part 1- Internal) - 2005 and IS: 732 as the case may be. Identification ferrules shall be used at both ends of the wires. All control wiring meant for external connections are to be brought out of terminal board.

The equipment shall be designed to confirm to the below requirements for LT Panels.

Sl. No.	Name of equipment	IS Code
1.	Air circuit breakers/MCCB	IS: 60947 (Part-II) & IEC 60947(2)
2.	Fuse switch and switch fuse units	IS: 13947 (Part-3) & IEC 947(3)
3.	HRC fuse links	IS: 13703
4.	Current Transformers	IS: 2705
5.	Voltage Transformers	IS: 3156
6.	Indicating instruments	IS: 1248
7.	Integrating instrument	IS: 722
8.	Control switches and push buttons	IS: 6875
9.	Auxiliary contactors	IS: 13947 (Part4/Sec-I) & IEC 947(4/1)
10	Relays	IS: 3231

OPERATIONAL REQUIREMENTS

The indoor/outdoor type MV panel shall conform to the following:

a) The panel shall comprise of incomers, outgoing feeders and bus coupler as specified. The incomer shall be either a double break / contact repulsion MCCB or an Air Circuit Breaker. The bus coupler shall be either a circuit breaker or a double break / contact repulsion MCCB as specified. The outgoing feeders shall be circuit breakers/MCCBs as specified.

b) Bus bars for phase and neutral shall have a rating as per specifications.

c) The entire switch panel shall be cubical type generally conforming to IS: 86231-1993 for factory assembled switch board.

d) The incomer panel shall be suitable for receiving bus trucking or MV cable of size specified either from top or from bottom.

e) All incoming AIRCIRCUIT BREAKER/MCCB shall have suitable adjustable tripping current and the time delay settings.

f) The entire panel shall have a common earth bar of size as specified with two terminals for earth connections.
A suitable size of brick / cement concrete plinth shall be provided for out door panels at site as specified and to suit easy access and operational convenience.

48. Rating and Requirements

48.1 Air Circuit Breaker

All Air Circuit Breakers shall be 3/4 pole with minimum 50 KA breaking capacity (35 MV A at 433V) conforming to IS/IEC 60947-2 & IEC 60947-2. Rated current shall be as per capacities specified. The equipment shall be complete with the following:

a) Necessary circuit breaker carriage with 3 positions (isolate, test, service) draws out mechanism.
b) Necessary isolating plugs and sockets.
c) Necessary mechanism interlock and automatic safe shutters gear with arrangement for pad locking.
d) Necessary independent manual spring mechanism with mechanical On/Off indication as well as electrical On/Off indication.
e) Necessary bus bars with bolted type neutral links.
f) ACB shall be provided with microprocessor-based releases having built in over load, short circuit & earth fault protection. Microprocessor release shall be EMI(electromagnetic induction)/EMC (electromagnetic compatible) certified.
g) Necessary set of auxiliary switches.
h) Necessary set of CTs with ratios as specified
i) Necessary identification, metering requirements as specified i/c. ON/OFF indication lamps, selector switches, fuses, ammeter, voltmeter etc.
j) In case of 4 pole breaker neutral shall be fully rated with adjustable settings from 50% to 100% of In.
k) ACB terminals shall be suitable/suitably brought out for direct aluminum termination as per IS: 13947 Part-II.

48.2 MCCB

All MCCBs shall be current limiting type with features of load line reversibility and suitable for Horizontal / Vertical mounting without any derating. Beyond 300Amps capacity MCCBs shall have positive isolation and preferably double break contact repulsion & double insulation features. The MCCBs shall invariably be used with terminal spreaders. For all MCCBs, Ics= Icu.

48.3 Bus Bar Marking

Bus bars and main connections shall be marked by color or letter on MV Panels.

48.4 TESTS AT MANUFACTURERS WORK

All routine tests shall be carried out and test certificates produced to the department.

49. INSTALLATION, TESTING & COMMISSIONING

49.1 The installation work shall cover assembly of various sections of the panels lining up, grouting the units etc. In the case of multiple panel switch boards after connecting up the bus bars etc., all joints shall be insulated with necessary insulation tape or approved insulation compound. A common earth bar as specified

shall be run inside at the back of switch panel connecting all the sections for connection to frame earth system. All protection and other small wirings for indication etc. shall be completed before calibration and commissioning checks are commenced. All relays, meters etc. shall be mounted and connected with appropriate wiring.

49.2 Commissioning checks and tests shall include all wiring checks and checking up of connections. Relay adjustment/setting shall be done before commissioning in addition to routine Megger tests. Checks and tests shall include the following:

a) Operation checks and lubrication of all moving parts.
b) Interlock function checks.
c) Continuity checks of wiring, fuses etc. as required.
d) Insulation test: When measured with 500V Megger the insulation resistance shall not be less than 100 mega ohms.
e) Trip tests and protection gear test.

50. Earthing 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.

Note: for a single transformer sub-station, the total number of earth electrodes shall be 4 (2 for neutral and 2 for connection to a common earth bus for body earthing). For a two transformers 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).

50.1 ELECTRODES

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

50.2 LOCATION of EARTH 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.

50.3 WATERING ARRANGEMENT

Method of watering arrangement shall comply with CPWD General Specifications.

50.4 SIZE OF EARTH 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 lead shall be 25mm x 5mm copper of equivalent GI strip.

50.5 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 60cm 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.

SAFETY REQUIREMENTS, TESTING, STANDARDS& APPROVALS

51. SCOPE

1. Quality Assurance Plans- Internal Electrical Installations

a) The detailed instructions on safety procedures given in BIS code no. 5216:1982

b) "Code of safety Procedures and Practices in Electrical works" shall be strictly followed.

c) Safety procedures given in Chapter 10 of CPWD General Specifications for Electrical works Part-1(Internal) shall be followed.

d) Safety recommendation as per IE rules 1956 as per Appendix "C".

e) The materials shall be tested from 3rd Party laboratories. Expenses of testing to be borne by contractor.

f) Provisions and fixing of check-nuts for conduit work as per CPWD Specifications.

g) No. of wires in one conduit shall be ensure as per CPWD Specifications.

h) Colour coding of wires to be ensured.

i) Lugs and thimbles at cable/ wire ends in switch boxes as per CPWD Specifications. Flexible GI conduits/PVC sleeve to be provided for the wiring wherever required, particularly for the light fittings below the roof and above the false ceiling areas, with proper coupling arrangements.

j) Labeling of switch boxes shall be ensured.

k) Termination of earth terminals in earth pits, switch box, DBs and accessories to be ensured. Earth chamber to be constructed and proper marking to be done.

l) A comprehensive schematic diagram to be prepared starting from the main board up to the final DBs. All such boards are duly marked and numbered.

2. Testing:

a) After completing the work, necessary test results as envisaged in CPWD General Specifications Part-I (Internal)-2023 & CEA regulations 2023 shall be recorded and submitted to the department. The results shall be in the permissible limits. Test report forms duly signed by authorized person/owner shall be submitted to Electricity Company by the agency. It will be the responsibility of contractor to get provides electricity connections.

b) The pre-commissioning testing of the installation shall be carried out such as
(i) Insulation resistance test.
(ii) Polarity test of switch.
(iii) Earth continuity test.
(iv) Earth electrode resistance test.

c) All the tests at site shall be carried out for the completed installations, in the presence of and to the satisfaction of the Engineer in Charge by the contractor. All the test results shall be recorded and submitted to the Department.

d) On completion of an electrical installation (or an extension to an installation), a certificate shall be furnished by the electrical contractor, countersigned by the certified supervisor under whose direct supervision the installation was carried out.

e) This certificate shall be in the prescribed form as given in Appendix "E" of CPWD

f) General Specifications for Electrical Works Part-1(Internal) in addition to the test certificate required by the local electric supply authorities.

g) All electrical & mechanical fittings / fixtures / appliances, to be provided for the work, should have latest minimum 5-star rating (of BEE) as available in market.

h) The work of internal EI shall be carried out As per CPWD Specifications for Electrical Works Part I Internal Electrical – 2023, CPWD Specifications for Electrical Works Part II External Electrical and CPWD Specifications for Electrical Works Part IV Sub-station – 2013. Work shall be carried out with copper wires, double door DBs, steel/PVC conduit, indoor floor panels.

3. Drawings to be submitted for approval, before start of any work:

The contractor shall prepare and submit three sets of hard copy of following drawings and 2 sets in soft copy and get them approved from the Engineer –In –Charge before the start of the work. The approval of drawings however does not absolve the contractor not to supply the equipment / materials as per agreement, if there is any contradiction between the approved drawings and agreement.

(i) Layout scheme, Plan and Elevations
(ii) Conduit Layout, Circuit details with Loading
(iii) Selection of cables and wires
(iv) SLD detailed
(v) TDS of equipments/material
(vi) Drawings showing details of Foundation/Wall supports etc.
(vii) Any other drawings relevant to the work.
(viii) Data sheets of equipments

4. Drawings after completion of work

The contractor shall submit Six sets of as built drawings of hard copies and 3 sets in soft copy to the owner/ Engineer-In-Charge after completion of the work. In addition following shall also be provided:

a. Test Certificates
b. Warrantee Certificates
c. O&M Manuals of Equipments
d. Any other information the Engineer-In-Charge may dream fit.

5. LIST OF INDIAN STANDARDS (IS) FOR INTERNAL ELECTRICAL INSTALLATION (for reference only)

IS : 374 - 1979	Ceiling fans and regulators (3rd revision)
IS : 694 - 1990	PVC insulated Electric cable for working voltage upto and including 1100 volts.
IS : 732 - 1989	Code of practice for electrical wiring and installation
IS : 1255 - 1983	Code of Practice for installation and maintenance of Power Cables upto and including 33 KV rating (Second Revision)
IS : 1258 - 1987	Bayonet lampholders(Third revision)

IS : 1293 – 1988	Three pin plugs and sockets outlets rated voltage upto and including 250 volts and rated current upto and including 160 amps.
IS : 1646 - 1982	Electrical installation fire safety of buildings(general) Code of practice.
IS : 1885 - 1971	Glossary of items for electrical cables and conductors
IS : 1913 – 1978	General and safety requirements for fluorescent lamps luminaries Tubular.
IS : 2309 - 1989	Protection of building and allied structures against lightning
IS : 3043 - 1987	Code of practice for earthing.
IS : 3480 - 1966	Flexible steel conduits for electrical wiring.
IS : 3837 - 1976	Accessories for rigid steel conduit for electrical wiring.
IS : 4146 - 1983	Application guide for voltage transformers
IS : 4615 - 1968	Switch socket outlets.
IS : 5216 - 1982 (Part-I)	Guide for safety procedures and practices in electrical work.
IS : 8130 - 1984	Conductors for insulated electric cables and flexible cords
IS : 9537 - 1981	Rigid Steel Conduits for electrical wiring (Second Revisions)
IS : 13947 - 1993	General requirement for switchgear and control gear for voltage not exceeding 1000 Volts.

51.1 REQUIREMENTS

Safety provisions shall be generally in conformity with appendices (A) and (C) of CPWD General specifications of Electric Works (Par I Internal) 2023. In particular following items shall be provided:

a) Insulation mats

Insulation mats conforming to IS: 15652-2006 shall be provided in front of panels as well as other control equipments as specified.

b) First Aid Charts and First Aid Box

Charts (one in English, one in Hindi, one in Regional language), displaying methods of giving artificial respiration to a recipient of electrical shock shall be prominently provided at appropriate place. Standard first aid boxes containing materials as prescribed by St. John Ambulance Brigade or Indian Red Cross should be provided in each sub-station.

c) Danger Plate

Danger Plates shall be provided on HV and MV equipments. MV danger notice plate shall be 200mm x 150mm made of mild steel at least 2 mm thick vitreous enameled white on both sides and with the descriptions in signal red colour on front side as required. Notice pates of other suitable materials such as stainless steel, brass or such other permanent nature material shall also be accepted with the description engraved is signal red colour.

d) Fire Extinguishers

Portable CO2 conforming to IS: 2878-1976/Chemical conforming to IS: 2171-1976 extinguishers, HCFC Blend A(P-IV) shall be installed in the sub-station at suitable places. Other extinguishers recommended for electric fires may also be used.

e) Fire Buckets

Fire buckets conforming to IS: 2546-1974 shall be installed with the suitable stand for storage of water and sand.

Executive Engineer (E)
Postal Electrical Division
New Delhi.

COMMERCIAL AND ADDITIONAL CONDITIONS FOR LAN NETWORKING SYSTEM

1. The LAN Networking with switches will be installed at **Electrical repair and maintenance work for ground floor at Sector-7 Post Office building, Faridabad (HR).**

2. The work shall be executed as per CPWD General Specifications for Electrical works amended up to date & as per relevant IS and as per directions of Engineer-in-charge.

3. The tenderer should in his own interest visit the site and familiarizes himself with the site conditions before tendering.

4. No T&P shall be issued by the department and nothing extra shall be paid on account of this.

4. All the LAN Networking items with switches should be of compatible apprved make to have better compatibility. The bid of the tenderer using different makes for different components will not be acceptable. The firm must submit a letter from equipment manufacturer that the model of Conferencing equipment's including accessories quoted by them is in continuous process of manufacturing and in this respect the decision of the Engineer-in-charge is final & binding on the contractor.

5. Item must be complete with all equipment's and required accessories along with necessary power systems, video connector, plugs, sockets and hardware/software as required for complete installation of the system under this contract and present scope of work.

6. The firm should visit the site before quoting their rates so as to satisfy themselves with all site working conditions, cable routes etc.

7. All software & hardware should be in upgrade version.

8. Conferencing products should be with minimum two years warranty / as per OEM standards & OEM must have service centre for prompt repairing and replacement at Any damage done to the building/false ceiling/Exhibits is to be made good by the contractor with no extra cost by department.

9. For Sundry of material, the agency has to make his own arrangement. No separate storage accommodation shall be provided by the department. Watch and ward of the stores and their safe custody shall be the responsibility of the contractor till the final taking over of the installation by the department.

10. The Firm shall ensure adequate and prompt after sales service in the form of maintenance, spares and personnel are available at site of work during the guarantee period to minimize the breakdown period. The firm shall also ensure that in the event of any breakdown of the system, that area is made operational within 24 hrs. Otherwise a penalty as deemed reasonable by Engineer-in-charge shall be recovered from the firm (which will be minimum Rs 1000/- per day).

11. **DOCUMENT TO BE FURNISHED ON COMPLETION OF INSTALLATION**

Three sets of the following shall be furnished to the department by the contractor on completion of

a) Completion drawings
b) Manufacturer's technical catalogues of all equipment and accessories.
c) Operation and maintenance manual of all major equipment detailing all adjustment,

operation and maintenance procedure. – 3 Sets

14. All the safety procedures outlined in the CHAPTER 10 (SAFETY PROCEDURE) of CPWD General Specifications for Electrical Works Part – I Internal 2023 shall be complied with.

15. PAYMENT TERMS

The following percentage of contract rates shall be payable against the stages of work shown here in:

S. No	Stage of work	Payment
1	After supply of equipment at site in good condition on pro- rata Basis	70%
2	On completion of pro-rata installation	20 %
3	On commissioning and completion in all respects	5 %
4.	Handing over of the total installations to the department.	5%

For other items, the terms of payment will be decided by the Engineer-In-Charge and shall be binding on the contractor.

Executive Engineer (E)

Product Directory

S. no.	Details of material/equipment	Manufacturer`s name/make
1	MCB, Isolator, Industrial Plug Socket, RCCB, ELCB	Schneider Electric / Legrand / LK (FORMERLY L&T)/ ABB / Seimens / Havells / C&S / Indoasian / CG/HPL
2	DB / Loose wire Box	Schneider Electric / Legrand / LK (FORMERLY L&T)/ ABB / Seimens / Havells / C&S / Indoasian / CG / HPL
3	MCCB / ACB	Schneider Electric / Legrand / LK (FORMERLY L&T)/ ABB / Seimens / Havells / C&S / Indoasian / CG/HPL
4	Change Over Switch	LK (FORMERLY L&T)/ Havells/ ABB / C&S / CG / HPL Socomec / Schneider Electric / Seimens/HPL
5	Contactor	LK (FORMERLY L&T) / ABB / C&S / CG / Havells / Legrand / Schneider Electric / Siemens/HPL
6	MS Conduit (ISI marked)	BEC/ NIC/ AKG/ M-Kay / Steel Craft / Vikas
7	PVC Conduit (ISI marked)	AKG/ Astral/ Finolex / M-Kay / Press Fit/ Precision / Supreme / Polycab
8	Modular Switch, Socket/Telephone socket/ cable TV Socket/ Data outlet socket/ Fan Regulator	ABB / Anchor / Schneider Electric /Legrand / MK /Havells (Crabtree) /HPL
9	FRLS PVC ins. Copper cond. Single core cable for wiring (ISI marked)	Finolex / Havells / KEI / Polycab / Rallison / RR Cabel/Plaza/HPL
10	Armoured/ Unarmoured telephone cable, coaxial cable	Finolex / Havells / KEI / Polycab / Rallison / RR Cabel/Plaza/HPL
11	LAN/CAT-6 / IO / Patch Cord	Legrand / D Link / Digilink / Havells / Finolex
12	Phenolic laminated sheet/ Bakelite sheet	Hylem / Formica / Mylam/ Greenlam
13	Call bell/Buzzer	Legrand / Siemens / LK (FORMERLY L&T) / MK / Anchor / Havells / Philips/HPL
14	PVC Trunking	MK / Schneider Electric / Legrand / AKG
15	LED Fittings	Wipro/ Phillips/ Crompton / Havells / Jaquar / Regent / Trilux / Lighting Technology / Bajaj/OSRAM/HPL
16	Exhaust Fan/Wall Fan/Fresh Air fan	Havells / Crompton / Usha / Orient/ALMONARD/ATOM BERG/HPL
17	BLDC Ceiling Fan	Atom Berg / Crompton / Havells / Orient / Usha/HPL
18	Wall Bracket fitting	Wipro/ Phillips/ Crompton / Havells/ Trilux/ Lighting Technology/ Panasonic / Bajaj / Jaquar/OSRAM
19	LED Lamp	Wipro / Phillips / Crompton / Havells / Osram / Jaquar/OSRAM/HPL
20	LED Post Top fitting/Street Light Fittings	Wipro/ Phillips/ Crompton / Havells / Jaquar / Lighting Technology / Panasonic/ Bajaj/HPL
21	XLPE insulated PVC Sheathed Alum. / Copper conductor Armored / Unarmored cable of 1.1 KV grade	Finolex / RR Kabel / KEI / Havells / Polycab / Rallison/PLAZA/HPL
22	Cable Jointing Kit	Densons / M-Seal / Raychem.
23	Polycarbonate Junction box/ Enclosure	Hensel/ Sintex / Tyco/HPL
24	D.W. Corrugated HDPE pipe (ISI marked)	Rex / Duraplast/ Triputi/ Duraline/ CPE
25	MS / GI Cable Tray	MEM/BEC/Legrand/OBO/Milestone/Neptune/MK
26	Submersible Pump/ Mono Block Pump	Kirloskar / KSB / Crompton Greaves / CRI / Havells
27	Geysers	Racold/CG/Havells/ Usha/Venus/ Jaquar/Bajaj.

28	Window/Split AC	Mitsubishi/ O General/ Carrier/Daikin/Hitachi/Blue Star/Voltas/ LG/ Samsung/Lloyds/Panasonic/Toshiba/Godrej
29	Cassette AC	Mitsubishi/ O General/ Carrier/Daikin/Hitachi/Blue Star/Voltas/ LG/ Samsung/Lloyds/Panasonic/Toshiba/Godrej
30	VRV / VRF AC	Carrier / Daikin / Mitshubishi Electric / O-General / Toshiba
31	CT/PT	AE/ Havells/ Indocoil/ Kappa/ Kaycee/ LK (FORMERLY L&T) / Marshal/ Meco/ Rishabh/ Siemens/ Universal
32	LED type indicating lamp/ Push Button	Havells / Indocoil / Kaycee / Meco / Siemens / Universal / Vaishno / Schneider Electric / LK (FORMERLY L&T)/ Seimens /ABB
33	Selector Switch & Toggle switch	AE / Kaycee/ Meco / Rishabh/ Universal / Vaishno / ABB / LK (FORMERLY L&T) / Siemens
34	Conventional/ Electronic Digital Meters (A/V/PF/Hz/KW/KWH/Multi Function Meter)	AE / Havells / Kaycee / Meco / Rishabh / Siemens / Universal / LK (FORMERLY L&T)/ Secure/ HPL
35	Terminal Block & Connectors	Elmex/ Wago/ Hensel/ Connectwell /Dowels
36	Timer	ABB/ AE/ Havells/ LK (FORMERLY L&T) / Legrand/ Minilec/ Schneider Electric/ Siemens
37	Single Phase Preventer	Minilec/ LK (FORMERLY L&T) /Siemens/ Zerotrip
38	Capacitor	Appeco/ Asian/ CG/ Khiatan/LK (FORMERLY L&T) / Usha/ Universal.
39	FASD Starter/ DOL starter / Star delta starter	L&T/ABB/Cutler Hammer/ Schneider/Neptune
40	Rubber Matting	ISI Mark
41	GI pipe	Tata / Jindal / Sail / Swastik / Zenith
42	GI Sheet	HSL/ Jindal/ National/ Nippon Denro/ SAIL/ Tata
43	Battery	Amar Raja/ Amaron/ Amco/ Exide/ Furukawa/ Hitachi/ CG/ Kirloskar
44	Rising Main	C&S/ LK (FORMERLY L&T)/Schneider/Legrand/ Seimens.
45	Package / Unitised Substation	ABB/ CG/ Kirloskar/ Legrand/ Schneider Electric
	DG Set	
46	Engine	Ashok Leyland / Caterpillar / Cummins / Greaves / Kirloskar
47	Alternator	Greaves / ELGI / Kirloskar / Stamford / Leroy-Somer
	CCTV	
48	Dome/Bullet/PTZ Cameras	Bosch / Sony / Honeywell / Siemens / CP Plus / Hikvision
49	Network Video Recorder (NVR)	TP Link/ Samsung/ Panasonic/ Honeywell/ CP Plus / Hikvision
50	Switches	CISCO / HP / Netgear/Hikvision/DLink
51	Hard Disc (Surveillance Grade)	Seagate / Western Digital / Toshiba
52	Rack	Valrack / DLink
	Fire Fighting	
53	Main Fire / Terrace / Sprinkler / Jockey / Priming pump sets	Grundfos / Kirloskar /Wilo Mather & Platt/ KSB / Armstrong / Crompton
54	Motors	Siemen / ABB / Kirloskar / CG / Bharat Bijlee /Lubi
55	Diesel Engine	CNP / KOEL/ Cummins / Greaves / Mahindra / Lubi
56	Fire Brigade connection	GeTech/Newage/Agni/Ceasefire
57	Branch Pipe	GeTech/Newage/Agni/Ceasefire

58	Hydrant valves	Newage/Ceasefire/Safex/Kalpana/L&T valves/Life-Guard
59	CIDF Butterfly valve / Sluice valve/ Non-return valve / Foot valve/strainer. (Valves to be ISI marked only)	Advance / Audco (L&T) / Leader / Sant /Kirloskar /ZOLOTO
60	First Aid Hose Reel, ISI mark with hose reel drum, Double/Single Hydrant valve/branch pipe all with ISI mark	Newage / Minimax / Ceasefire / Omex / GETECH
61	RRL hose pipe, hose coupling (To be ISI marked only)	DUNLOP/JYOTI/MARUTI/NEW AGE/GE TECH/ Minimax / Cease fire / Omex
62	PRESSURE SWITCH	INDOFOSS/ FEIBIG/ Honeywell / Siemens
63	Flow Switch	Siemens / Anergy / Honeywell/Rapidcool / Jonson Control
64	Pressure Gauge	Fiebig / H-Guru/ Emerald
65	Fire extinguishers (ISI marked)	Ceasefire/ Minimax /Safex / Kanex
66	COATING /WRAPPING	INTEGRATED WATER PROOFING (PYPKOTE)
	Fire Detection & Alarm	
67	Heat Detector / Smoke Detector	Apollo/ System Sensor / Honeywell / Siemens / Edwards / Agni Instruments
68	Intelligent Addressable fire alarm control panels	Apollo / System Sensor / Honeywell / Siemens / Edwards
69	Manual (Conventional) Fire Alarm Control Panel	Agni Instruments / Ravel Electronics/ System Sensor / Honeywell / Siemens / Edwards / GST
70	PA System	Ahuja / Philips / Motwani / Yamaha / Ahuja /Bosch
71	Hooters / Sounders	Should be same make as the FACP
	Solar	
72	Crystalline PV modules (Poly/Mono/TOPCon)	Indigenous makes – Emmvee/ HHV/ Tata Solar/ Vikram/ Waaree/ Websol Energy/ Premier Energies / Mundra Solar Energy (Adani Solar)
73	PCU/Inverter	FIMER (ABB) / Delta / SMA /Solar / Tata Solar / Growatt / K Solare / Luminous / Waaree / Havells / Sungrow
74	DC Cable	Finolex / Havells / KEI / Polycab / RR Cabel
75	Other accessories	As approved by the engineer-in-charge

Executive Engineer (E)
Postal Electrical Division
New Delhi.

Schedule of Quantity

Name of work: Electrical repair and maintenance work for ground floor at Sector-7 Post Office building, Faridabad (HR).

Sr. No.	Description of Items	Qty		Rate	Unit	Amount	DSR"25 code/ MR
	(SH-I Wiring)						
1	Wiring for light point/ fan point/ exhaust fan point/ call bell point with 1.5 mm² FRLS/HFFR PVC insulated copper conductor single core cable in surface / recessed medium class PVC conduit, with modular switch, modular plate, suitable GI box and earthing the point with 1.5 mm² FRLS/HFFR PVC insulated copper conductor single core cable etc. as required.						
a)	(Group C)	25	Point	1704	Point	42600.00	1.10.3
2	Rewiring for light point/ fan point/ exhaust fan point/ call bell point with 1.5 mm² FRLS/HFFR PVC insulated copper conductor single core cable and 1.5 mm² FRLS/HFFR PVC insulated copper conductor single core cable as earth wire in existing surface/ recessed steel/PVC conduit including dismantling as required.						

a)	(Group C)	20	Point	1064	Point	21280.00	1.15.3
3	Wiring for light point/ fan point/ exhaust fan point/ call bell point with 1.5 mm² FRLS/HFFR PVC insulated copper conductor single core cable in surface/ recessed steel conduit, with modular switch, modular plate, suitable GI box and earthing the point with 1.5 mm² FRLS/HFFR PVC insulated copper conductor single core cable etc as required. (Group C)	10	Point	2101	Point	21010.00	1.3.3
4	Wiring for twin control light point with 1.5 sq.mm FRLS/HFFR PVC insulated copper conductor single core cable in surface / recessed medium class PVC conduit, 2 way modular switch, modular plate, suitable GI box and earthing the point with 1.5 sq.mm FRLS/HFFR PVC insulated copper conductor single core cable etc. as required.	2	Point	1803	Point	3606.00	1.11
5	Rewiring for twin control light point with 1.5 mm² FRLS/HFFR PVC insulated copper conductor single core cable and 1.5 mm² FRLS/HFFR PVC insulated copper	2	Point	1064	Point	2128.00	1.16

	conductor single core cable as earth wire in existing surface/ recessed steel/PVC conduit including dismantling as required.						
6	Wiring for circuit/ submain wiring alongwith earth wire with the following sizes of FRLS/HFFR PVC insulated copper conductor, single core cable in surface/ recessed medium class PVC conduit as required.						
a)	2 x 1.5 mm² + 1 x 1.5 mm² earth wire	95	m	267	m	25365.00	1.14.1
b)	4 x 1.5 mm² + 2 x 1.5 mm² earth wire	45	m	363	m	16335.00	1.17.6 + 1.21.2
c)	2 x 4.0 mm² + 1 x 4.0 mm² earth wire	35	m	373	m	13055.00	1.14.3
d)	4 x 4.0 mm² + 2 x 4.0 mm² earth wire	25	m	587	m	14675.00	1.14.8
e)	2 x 6.0 mm² + 1 x 6.0 mm² earth wire	30	m	482	m	14460.00	1.14.4
7	Supplying and drawing following sizes of FRLS/HFFR PVC insulated copper conductor, single core cable in the existing surface/ recessed steel/ PVC conduit as required.						
a)	1 x 1.5 mm²	65	m	51	m	3315.00	1.17.1
b)	3 x 1.5 mm²	55	m	104	m	5720.00	1.17.3
c)	4 x 1.5 mm²	10	m	130	m	1300.00	1.17.4
d)	6 x 1.5 mm²	45	m	195	m	8775.00	1.17.6
e)	7 x 1.5 mm²	5	m	234	m	1170.00	1.17.7
f)	9 x 1.5 mm²	15	m	311	m	4665.00	1.17.9
g)	3 x 4.0 mm²	15	m	222	m	3330.00	1.17.21
h)	6 x 4.0 mm²	15	m	424	m	6360.00	1.17.24
i)	3 x 6.0 mm²	10	m	326	m	3260.00	1.17.30
j)	6 x 6.0 mm²	15	m	641.00	m	9615.00	1.17.33

8	S/ F of following sizes of medium class Steel/ PVC conduit along with accessories on surface/ in recess including painting in case of surface conduit or cutting the wall and making good the same in case of recessed conduit as required						
a)	20 mm Steel	10	m	254	m	2540.00	1.20.1
b)	25 mm Steel	10	m	289	m	2890.00	1.20.2
c)	20 mm PVC	10	m	151	m	1510.00	1.21.1
d)	25 mm PVC	35	m	168	m	5880.00	1.21.2
e)	32 mm PVC	5	m	209	m	1045.00	1.21.3
9	Supplying and fixing metal box of following sizes (nominal size) on surface or in recess with suitable size of phenolic laminated sheet Cover in the front including painting etc. as required.						
a)	150 mm X 150 mm X 60 mm deep	2	nos	360	each	720.00	1.22.4
b)	180 mm X 100 mm X 60 mm deep	2	nos	282	each	564.00	1.22.5
c)	200 mm X 125 mm X 60 mm deep	2	nos	372	each	744.00	1.22.6
d)	200 mm X 150 mm X 75 mm deep	2	nos	406	each	812.00	1.22.7
10	Supplying and fixing following modular switch/ socket on the existing modular plate & switch box including connections but excluding modular plate etc. as required.						
a)	5/ 6 amps switch	80	nos	121	each	9680.00	1.24.1

b)	2 way 5/ 6 amps switch	2	nos	168	each	336.00	1.24.2
c)	15/ 16 amps switch	2	nos	176	each	352.00	1.24.3
d)	3 pin 5/ 6 amps socket outlet	60	nos	136	each	8160.00	1.24.4
e)	3 pin 15/ 16 amps socket outlet	2	nos	219	each	438.00	1.24.5
f)	Electronic fan regulator (2 Module)	20	nos	402	each	8040.00	1.25
g)	Modular blanking plate	15	nos	47	each	705.00	1.26
11	Supplying and fixing following size/ modules, GI box alongwith modular base & cover plate for modular switches in recess etc as required						
a)	1 or 2 Module (75mm x 75mm)	2	nos	354	each	708.00	1.27.1
b)	3 Module (100mm x 75mm)	1	nos	384	each	384.00	1.27.2
c)	4 Module (125mm x 75 mm)	5	nos	401	each	2005.00	1.27.3
d)	6 Module (200mm x 75mm)	4	nos	462	each	1848.00	1.27.4
e)	8 Module (125mm x 125 mm)	4	nos	517	each	2068.00	1.27.5
f)	12 Module (200mm x 150mm)	4	nos	614	each	2456.00	1.27.6
g)	18 Module	2	nos	955	each	1910.00	MR
12	Supplying and fixing following Modular base & cover plate on existing modular metal/ PVC boxes etc. as required.						
a)	8 Module (125mm x 125 mm)	1	nos	238	each	238.00	1.28.5
b)	12 Module (200mm x 150mm)	8	nos	301	each	2408.00	1.28.6
13	Supplying and fixing following size/ modules, PVC box excluding modular base & cover plate for modular switches in recess etc as required						

a)	3 Module (100mm x 75mm)	8	nos	133	each	1064.00	MR
b)	8 Module (125mm x 125 mm)	1	nos	267	each	267.00	MR
c)	12 Module (200mm x 150mm)	8	nos	293	each	2344.00	MR
14	Supplying and fixing suitable size GI box with modular plate and cover in front on surface or in recess, including providing and fixing 6 pin 5/6 & 15/16 A modular socket outlet and 15/16 A modular switch, connections etc. as required.	10	nos	659	each	6590.00	1.32
15	Supplying and fixing 3 pin, 5 amp ceiling rose on the existing junction box/ wooden block including connection etc as required.	5	nos	104	each	520.00	1.33
16	Supplying & fixing suitable size GI box wih modular plate and cover in front on surface or in recess including providing and fixing 25 A modular socket outlet and 25 A modular SP MCB, "C" curve including connections, painting etc. as required.	6	nos	807	each	4842.00	1.57
17	Supplying and fixing PVC batten/ angle holder including connections etc. as required.	2	nos	132	each	264.00	1.58
18	Laying of PVC insulated PVC sheathed/ XLPE power cable of 1.1 KV grade of size not exceeding 35 Sqmm.						

	In following manner etc complete as required						
a)	direct in ground including excavation and refilling the trench etc as required, but excluding sand cushioning and protective covering.	5	m	253	m	1265.00	10.3.1
b)	In the existing RCC/ HUME/ Stoneware/ Metal pipe	5	m	47	m	235.00	10.5.1
c)	on surface manner (clamped with 1mm thick saddle)	25	m	64	m	1600.00	10.7.1
d)	Above 35 sq. mm and upto 95 sq. mm (clamped with 25x3mm MS flat clamp)	15	m	151	m	2265.00	10.7.2
19	Supplying and making end termination with brass compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed/ XLPE aluminium conductor cable of 1.1 KV grade as required.						
a)	2 X 6 mm² (19 mm)	2	sets	294	set	588.00	11.1.1
b)	4 X 10 mm² (28 mm)	2	sets	325	set	650.00	11.1.32
c)	3½ X 25 mm² (28 mm)	2	sets	371	set	742.00	11.1.20
d)	3½ X 35 mm² (32 mm)	2	sets	437	set	874.00	11.1.21
e)	3½ X 50 mm² (35 mm)	2	sets	484	set	968.00	11.1.22
f)	3½ X 70 mm² (38 mm)	2	sets	542	set	1084.00	11.1.23
20	Supply of following size PVC insulated, PVC sheathed/ XLPE armoured, Copper/Aluminium conductor power cable of 1.1 kV grade (ISI marked) as reqd. (M/s Havells/						

	Polycab or Similar superrior make)						
a)	2 X 6 mm²	10	m	250	m	2500.00	MR
b)	4 X 10 mm²	10	m	471	m	4710.00	MR
c)	3½ X 25 mm²	10	m	563	m	5630.00	MR
d)	3½ X 35 mm²	5	m	728	m	3640.00	MR
e)	3½ X 50 mm²	10	m	970	m	9700.00	MR
f)	3½ X 70 mm²	5	m	1322	m	6610.00	MR
21	S/ F of following size unplasticised high impact strength PVC trunking with detachable front cover including all types of accessories like tee, socket, bends, end caps etc. on surface/ in recess, drilling holes, fixing rawl plugs, gutties, screws for firmly holding of the trunking/ fitting system etc. complete as reqd.(M/s Legrand/ Precision or similar superior model of ss make)						
a)	50 x 50 mm	10	m	233	m	2330	MR
b)	100 x 50 mm	10	m	446	m	4460	MR
22	Providing, laying and fixing 50 mm dia G.I. pipe (medium class) in ground complete with G.I. fittings including trenching (75 cm deep) and re-filling etc as required	10	mtr	762.15	mtr	7621.50	Civil DSR'23 item code18.12.6
23	S/F 3 mm thick phenolic laminated sheet cover on the existing switch board/ cover including making cut for the opening of the switch/ sockets etc complete as reqd.	1000	Sq Inch	2	Sq Inch	2000.00	MR

24	S/ F 2 mm thick steel (SS 304) plate to cover the metal boards in floor including nuts, screws, cutting as required size etc complete as reqd.	250	inch²	13	inch²	3250.00	MR
25	Cutting of pucca floor of following size to lay cable/pipe and making good the same including civil work 1:2:4 (1 cement : 2 coarse sand (zone-III) derived from natural sources : 4 graded stone aggregate 20 mm nominal size derived from natural sources) etc complete as reqd.						
a)	150 mm wide x 150 mm deep	5	m	246	m	1230.00	MR
b)	150 mm wide x 300 mm deep	5	m	458	m	2290.00	MR
26	Credit on a/c of old dismantled unserviceable material i.e. wires, pipes, DBs a/w MCBs, switch boards a/w switches etc but excluding fans & light fixtures (Note:-The engineer-in-charge reserve the right to hand-over or not to hand over the dismantled unserviceable material to the agency in the consultation with the user).	1	Job	-1950	Job	-1950.00	MR
27	S/F MS fan hook of atleast 10mm Dia. on ceiling including cutting of RCC/ welding on purlin or GI pipe and making	5	nos	395	each	1975.00	MR

	good the same & made out of sutable size MS flat angle iron and MS bar etc complete as required as per direction of EIC.						
28	Dismantling of old existing wiring, switch boards, DB's, fans, panel, main switch, LAN, UPS with battery bank and reinstallation after shifting, all types fittings & accessories etc including making temporary arrangement for lighting, UPS, LAN etc and making the site ready for installation of new accessoreis etc. complete as required.	1	job	3910	job	3910.00	MR
					Total SH-I wiring	₹ 3,66,533.50	
	(SH-II LT Panel, MCB DBs, MCCBs, MCBs, Earthings and accessories)						
1	Supplying and fixing following way, horizontal type three pole and neutral, sheet steel, MCB distribution board, 415 V, on surface/ recess, complete with tinned copper bus bar, neutral bus bar, earth bar, din bar, interconnections, powder painted including earthing etc. as required. (But						

	without MCB/RCCB/Isolator						
a)	4 way (4 + 12), Double door	2	nos	4377	each	8754.00	2.4.1
2	Providing and fixing following rating and breaking capacity and pole MCCB with thermomagnetic release and terminal spreaders in existing cubicle panel board including drilling holes in cubicle panel, making connections, etc. as required						
a)	100 Amp, 30 kA, FP MCCB	3	nos	8127.00	each	24381.00	2.2.13
b)	125 Amp, 36 kA, FP MCCB	3	nos	8644.00	each	25932.00	2.2.14
3	S/Fixing 100 Amp 4 pole ON load changeover switch in the existing cubicle panel complete with auxiliary contact kit, operating handle including connections, testing and commissioning as complete reqd. (Make:- M/s legrand or ss make)	1	nos	8921.00	each	8921	MR
4	Supplying and fixing following way, single pole and neutral, sheet steel, MCB distribution board, 240 V, on surface/ recess, complete with tinned copper bus bar, neutral bus bar, earth bar, din bar, interconnections, powder painted including earthing etc. as required. (But without						

	MCB/RCCB/Isolator)						
a)	4 way, Double door	1	nos	1448	each	1448.00	MR
b)	6 way, Double door	1	nos	2390	each	2390.00	2.3.1
c)	8 way, Double door	1	nos	2773	each	2773.00	2.3.2
d)	12 way, Double door	1	nos	2871	each	2871.00	2.3.3
5	S/F following rating MCB/ Isolator suitable for inductive load of following pole in the existing MCB DB complete with connections, testing and commissioning etc. as reqd.						
a)	5-32 A, 10 kA 240 volts, "C" curve SP MCB	40	nos	285	each	11400.00	2.10.1
b)	5-32 A, 10 kA 240 volts, "C" curve DP MCB	2	nos	696	each	1392.00	2.10.3
c)	63 A, 230 volts DP Isolator	1	nos	569	each	569.00	2.12.2
d)	63 A, 415 volts FP Isolator	2	nos	1115	each	2230.00	2.13.2
e)	40A DP Isolator	2	nos	472	each	944.00	2.12.1
f)	40 amp. 2-way centre off MCB type Changeover Switch (M/s :- C&S or ss make)	1	nos	3006	each	3006.00	MR
6	S/F DP sheet steel enclosure on surface/ recess along with 25/32 A, 240 V “C” curve DP MCB complete with connections, testing and commissioning etc. as required.	2	nos	1258	each	2516.00	2.16
7	Earthing with G.I. earth plate 600 mm X 600 mm X 6 mm thick including accessories, and providing masonry enclosure with cover plate	2	Set	8351	Set	16702	5.4

	having locking arrangement and watering pipe of 2.7 metre long etc. with charcoal/ coke and salt as required.						
8	Earthing with G.I. earth pipe 4.5 metre long, 40 mm dia including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe etc. with charcoal/ coke and salt as required.	1	Sets	7658	set	7658.00	5.2
9	Providing and fixing 25 mm X 5 mm G.I. strip in 40 mm dia G.I. pipe from earth electrode including connection with G.I. nut, bolt, spring, washer excavation and re-filling etc. as required.	10	m	755	m	7550.00	5.11
10	Providing and fixing 25 mm X 5 mm G.I. strip on surface or in recess for connections etc. as required.	10	m	287	m	2870.00	5.15
11	Providing and fixing 6 SWG dia G.I. wire on surface or in recess for loop earthing along with existing surface/ recessed conduit/ submain wiring/ cable as required.	150	m	50	m	7500.00	5.18

12	Fabricating, supplying, installation, testing and commissioning compartmentalized type dust and vermin proof floor mounting, outdoor **double door**, front openable cubical distribution panel (Light and Power load) comprising for accomodating the following rating switch gears and accessories for operation on 415 V, 3 φ, 50 Hz AC supply. The panel shall be fabricated out of 16 SWG CRC sheet (for non load bearing parts) and 14 SWG CRC sheet (for load bearing parts) having minimum depth of 300 mm and shall be powder coated & sign writing. The panel shall have 200 Amp rating three phase and nutral Bus Bars, Solid connections, provision for required no. of cable entries Cable alley, Adaptor Box, earthing Bus in full length of panel made out of reqd size aluminium strip/suitable size of cooper strips, provision of sealing studs, minor civil works and MS stand of panel made out of 40X40X5 mm MS	3.15	m^2	43397.00	m^2	136700.55	MR

	angle iron and making good the damages as per specification including dismantling of existing panel and placing at desired location in building as per EIC etc. complete as reqd (Note: The drawing should be got approved by the engineer in charge before fabrication).						
a)	Space for accomodating 100 Amp, 30 kA, FP MCCB 03 Nos.						
b)	Space for accomodating 125 Amp, 36 kA, FP MCCB 03 Nos.						
b)	Space for accomodating DP/ TP/TPN MCB 08 Nos.						
c)	Space for accomodating 100 Amp 4 pole ON load changeover switch 1 Nos.						
13	Providing digital metering and RYB indication lamps along with required accesories like CTs, mcb, multifunction meter, FRLSH Copper conductor wiring etc for LT panel including testing and commissioning etc complete as reqd.	1	job	10850	job	10850.00	MR
					(SH-II LT Panel, MCB DBs, MCCBs,	₹ 2,89,358.00	

					MCBs, Earthings and accessories)		
	(SH-III Fans & Fittings)						
1	Supplying, installation, Testing & Commissioning of LED Recessed / surface Down lighter (Round / square/ Rectangular) SMD type of following body material with PMMA and prismatic diffuser and construction as per IS : 10322 with driver as per the requirement with Driver efficiency >85%, Operating voltage AC 140-270 Volt, freq 50/60 hz, Operating temp range -15 deg to 40 deg centigrade, internal surge protection of 2.5 KV with Short & Open circuit protection, THD < 10% , P. F.≥0.95, IP20, CRI >80 , UGR (Unified Glare Rating) < 19, Flicker free (flicker should be below 5 %), life time (LED,Driver & electrical circuitry), life time of minimum 50000 Burning Hours with, 70% of initial Lumen maintained till life ends , CCT 3000°K / 4000°K / 5700°K /6000°K/6500°K (As per ANSI Bin), SDCM(Standard Deviation Color						

	Matching) <3, Maximum power consumption should not more than the specified rating and Fixture shall be of relevant BIS standard and trade mark certificate (T.C.). Manufactures Word Mark/ Name Engraved/ Embossing/ Screen printing on housing. OEM must have its own in house NABL lab setup for all testing facilities for LED fixtures. "complete in all respect i/c connections with 1.5 sq mm FRLS/HFFR, PVC insulated copper conductor single core cable and earthing etc. as required with Minimum 5 year OEM warranty. System lumen efficacy ≥105 <120 lm/Watt output . LM79 & LM80 Test report from NABL lab for all testing required for LED fixtures as per BIS shall be submitted. Shape size and CCT shall be as approved by Engineer-in-Charge as per requirement. (Thermal management: heat sink of aluminum housing such that LED junction						

	temperature shall not rise above 90°C).						
	Powder coated die cast /Extruded aluminum Body including trim						
a)	12-15 watt	5	nos	715	each	3575.00	8.1.3
2	Supplying, Installation, Testing & Commissioning of LED surface mounted Batten light of following body material and construction as per IS : 10322 with driver (Replaceable) as per the requirement with Driver efficiency >85%, Operating voltage AC 140-270 Volt, frequency 50/60 hz, Operating temp range -5 °C to 40 °C, internal surge protection of 2.5 KV with Short & Open circuit protection, THD < 10%, P. F.≥0.95, IP20, CRI >80, Flicker free, (flicker should be below 5 %), life time (LED, Driver & electrical circuitry), of minimum 50000 Burning Hours with 70% of initial Lumen maintained till life ends, CCT 3000°K / 4000°K / 5700°K /6500°K (As per ANSI Bin), SDCM(Standard Deviation Colour Matching) <3, Maximum power consumption should not more than the						

	specified rating and Fixture shall be of relevant BIS standard. Manufactures Word Mark/ Name Engraved/ Embossing/ Screen printing on housing. complete in all respect i/c external connections with 1.5 sq mm FRLS/HFFR/HFFR, PVC insulated copper conductor single core cable and earthing etc. as required with Minimum 5 year OEM warranty. System lumen efficacy ≥105 <120 lm/Watt output . LM79 & LM80 Test report and all testing required for LED fixtures as per BIS shall be submitted. Shape size and CCT shall be as approved by Engineer-in-Charge as per requirement. (Thermal management: heat sink of aluminium housing such that LED junction temperature shall not rise above 90°C).						
	Powder coated die cast /Extruded aluminium Body (Thickness > 1.20 mm)						
a)	18- 22 watt	3	nos	681	each	2043.00	8.9.1
b)	36 watt	6	nos	678	each	4068.00	8.9.3

3	Supplying, installation, Testing & Commissioning of Panel light 2x2 ft., of following body material and construction as per IS : 10322 with driver as per the requirement with Driver efficiency >85%, Operating voltage AC 140- 270 Volt, freq 50/60 hz, Operating temp range -15 deg to 40 deg centigrade, internal surge protection of 2.5 KV with Short & Open circuit protection ,THD < 10% , P. F.≥0.95, IP20, CRI >80, UGR (Unified Glare Rating) < 19, Flicker free, (flicker should be below 5 %), life time (LED,Driver & electrical circuitry), of minimum 50000 Burning Hours with, 70% of initial Lumen maintained till life ends,CCT 3000°K / 4000°K / 5700°K /6000°K/6500°K (As per ANSI Bin), SDCM(Standard Deviation Color Matching) <3, Maximum power consumption should not more than the specified rating and Fixture shall be of relevant BIS standard and trade mark certificate (T.C.). Manufactures Word Mark/ Name						

	Engraved/ Embossing/ Screen printing on housing. complete in all respect i/c connections with 1.5 sq mm FRLS/HFFR, PVC insulated copper conductor single core cable and earthing etc. as required with Minimum 5 year OEM warranty. System lumen efficacy ≥105 <120 lm/Watt output . LM79 & LM80 Test report from NABL lab for all testing required for LED fixtures as per BIS shall be submitted. Shape size and CCT shall be as approved by Engineer-in-Charge as per requirement. (Thermal management: heat sink of aluminium housing such that LED junction temperature shall not rise above 90°C).							
	CRCA Sheet Body (Thickness ≥ 0.50 mm)						
a)	36 watt	18	nos	2059	each	37062	8.6.10

4	Supply, Installation, Testing and Commissioning of ceiling fan with Brush Less Direct Current (BLDC) Motor, class of insulation: B, 3 nos. metal(Aluminium alloy) blades, 30 cm long down rod, 2 nos. canopies, shackle kit, safety rope, copper winding, steel/Al body Power Factor not less than 0.9, Service Value (CM/M/W) minimum as below, 350 RPM (tolerance as per IS : 374-2019), THD (Total Harmonic Distortion) less than 10%, suitable for operation with regulator for speed control and all remaining accessories including safety pin, nut bolts, washers, temperature rise=75 0C (max.), insulation resistance more than 2 mega ohm, suitable for 230 V, 50 Hz, single phase AC supply, Ceiling Fan compliant to IS 374:2019 fan i/c external connections with 1.5 sq.mm FRLS/HFFR, PVC insulated copper conductor single core cable and earthing etc. as required.						
a)	1200 mm, service value ≥ 6.0 CM/Min/Watt, air	20	nos	2695	each	53900.00	9.2.3

	delivery 210 CM/Min (Minimum)						
5	Supplying, Installation, Testing and Commissioning of 300 mm sweep medium duty exhaust fan having IS 2312 marked medium duty motor, copper winding, double ball bearing, suitable for operation on 230 V 50 Hz single phase AC supply, in the existing opening including making good the damages, connection etc. as required. (Make :- Havells Model Ventil Air DB or similar superior make)	3	nos	3498	each	10494.00	MR
					(SH-III Fans & Fittings)	₹ 1,11,142.00	
	(SH-IV Fire Extinguishers)						
1	Supply and Fixing of 6 kg capacity ABC type ISI mark fire extinguisher conforming to IS : 15683 : 2006 with hose of standard length, pressure gauge, normally charged and ready for use, fixing the same on wall, pasted sticker having information like instructions to use, date of next refilling etc. complete as required. (M/s Minimax / Cease Fire or ss make)	1	nos	5333	each	5333.00	MR

2	Supply and Fixing of 4.5 kg capacity Co2 type ISI mark fire extinguisher conforming to IS : 15683 : 2006 with hose of standard length, normally charged and ready for use, fixing the same on wall, pasted sticker having information like instructions to use, date of next refilling etc. complete as required. (M/s Minimax / Cease Fire or ss make)	1	nos	8688	each	8688.00	MR
					(SH-IV Fire Extinguishers)	**₹ 14,021.00**	
	SH-V (LAN Wiring)						
1	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 etc. complete as required	8	nos	302	each	2416.00	39.15
2	Supplying, Installation, Testing and commissioning of following CAT6A Patch Cord should have ETL/UL verification program						

	certificate for compliance with ANSI/TIA-568.2-D etc. complete as required.						
a)	Copper Patch Cords of length 1m (3ft)	1	nos	173	each	173.00	39.13.1
b)	Copper Patch Cords of length 3m (10ft)	8	nos	405	each	3240.00	39.13.2
3	Supplying, Installation, Testing and commissioning of RJ45 Connector for CAT 6/6A Cables. RJ45 modular plug supports 4 twisted pairs, 8 positions, 8 connectors. Housing: PC, UL94V-2, transparent color, Use for 24- 26 AWG stranded wires etc. complete as required	8	nos	9	each	72.00	39.16
4	Supplying, drawing, Installation, Testing and commissioning of CAT6 UTP LSZH 23AWG Twisted Pair Cable in existing conduit/ on surface, Category 6 Unshielded Twisted Pair, 4 pair should be complied as per UL/ETL verification program for compliance with ANSI/TIA-568.2-D standard. Outer diameter should be in the range of 6.1mm nominal with Operating Temperature Range : -5° to +60°C, Bending Radius : < 4 X Cable Diameter at –5°C ± 1°C and Pulling Force						

	: 11.5Kg etc. complete as required.						
a)	1 run of cable	110	m	60	m	6600.00	39.17.1
b)	2 run of cable	50	m	96	m	4800.00	39.17.2
c)	3 run of cable	35	m	131	m	4585.00	39.17.3
d)	4 run of cable	25	m	167	m	4175.00	39.17.4
					SH-V (LAN Wiring)	₹ 26,061.00	
					Total SH-I wiring	₹ 3,66,533.50	
					(SH-II LT Panel, MCB DBs, MCCBs, MCBs, Earthings and accessories)	₹ 2,89,358.00	
					(SH-III Fans & Fittings)	₹ 1,11,142.00	
					(SH-IV Fire Extinguishers)	₹ 14,021.00	
					Total	**₹ 8,07,116**	

Executive Engineer (E)
Postal Electrical Division
New Delhi.