



INDIAN INSTITUTE OF TECHNOLOGY DELHI

HAUZ KHAS, NEW DELHI – 110016
TENDER DOCUMENT

NAME OF WORK : Round the clock Operation & Maintenance of E & M Services of Sonipat Campus of IIT Delhi

ESTIMATED COST ₹ : 1,46,60,941.00

EMD ₹ : 2,93,219.00 (No exemption allowed)

N.I.T. No. : 0725/109/IITD/SNP(E&M)/2024-25

Date of Opening : 27-12-2024

NIT for the above-mentioned work has been prepared with the following:

1	Amount of NIT (INR)	:	1,46,60,941.00
2	Earnest money (INR)	:	2,93,219.00
3	Period of Contract	:	12 months
4	Last date of submission (online)	:	26-12-2024 upto 3 PM
5	Date of opening	:	27-12-2024 after 3 PM
6	Form of NIT	:	CPWD / IITD – 8
7	Schedule applicable	:	Current Market Rate, DSR'22
8	Material stipulated	:	As per Schedule of Work
9	Chargeable heads	:	31.06.70
10	Work code no.	:	2021/006/0725
11	NIT No.	:	0725/109/IITD/SNP(E&M)/2024-25

Certified that this NIT contains 1 to 64 pages.
NIT amounting to Rs.1,46,60,941.00 is approved.

Sr. Asstt.

**Assistant Executive Engineer in-charge
AC Division**

Superintending Engineer (Electrical)

CONTENTS

Sr. No.	Description	Page	
		From	To
1	Notice Inviting Tender	04	05
2	Schedule of NIT	06	07
3	Instruction for online bid submission	07	10
4	Information & instruction to bidders	11	14
5	List of Mandatory Documents to be uploaded	15	16
6	IITD / CPWD 6 Form	17	20
7	Integrity Pact	21	27
8	IITD – 7/8 Form	28	29
9	Proforma of Schedule	30	35
10	Commercial & Additional conditions and Special condition	36	44
11	Details of Activities	45	53
12	Declaration (Annexure – 1)	54	54
13	Bid Submission Check List	55	55
14	Schedule of Quantity	56	64

INDIAN INSTITUTE OF TECHNOLOGY DELHI
NOTICE INVITING E-TENDER
IITD/WORKS (SP-4851)/2024

Assistant Executive Engineer-in-charge, AC Division, Indian Institute of Technology Delhi, Hauz Khas, New Delhi – 110016, Ph. No. 011-2659 1746 on behalf of Board of Governors invites online **Item Rate Tender** from **approved and eligible contractors of CPWD and those of appropriate list of M.E.S., BSNL, Railway dealing with E&M maintenance work** in two bid system as per details given below.

1	Name of work	:	Round the clock Operation & Maintenance of E & M Services of Sonipat Campus of IIT Delhi
2	NIT No.	:	0725/109/IITD/SNP(E&M)/2024-25
3	Estimated Cost (Rs.)	:	1,46,60,941.00
4	Earnest Money Deposit (Rs.)	:	2,93,219.00 (No exemption allowed)
5	Period of contract	:	12 months
6	Last date & time of bid submission	:	Upto 3 PM of 26-12-2024
7	Performance Bank Guarantee	:	5 percent of the tendered amount

The bid forms and other details may be downloaded from Central Public Procurement Portal (<http://eprocure.gov.in/eprocure/app>). Aspiring bidders who have not enrolled / registered in e-procurement should enrol / register themselves before participating through web site <http://eprocure.gov.in/eprocure/app>. The portal enrolment is free of cost. Bidders are advised to go through instructions provided at “Instructions for online bid submission.”

Bidders can access quotation / tender documents on the website (for searching in the NIC site), kindly go to quotation search option and type ‘IIT’. Thereafter, click on “GO” button to view all IIT quotations. Select the appropriate quotation / tender and fill them with all relevant information and submit the completed Quotation / Tender document online on the website <http://eprocure.gov.in/eprocure/app> as per the schedule given in the next page.

No manual bids will be accepted. All bids (both Technical & Financial) should be submitted in the e-procurement portal.

**Assistant Executive Engineer-in-charge, AC Division
For & on behalf of BOG, IIT Delhi**

Ch. Head	:	31.06.70	NPN	Work Code	:	2021/006/0725
----------	---	----------	------------	-----------	---	---------------

Copy to:-

1. A.R. (Works Accounts)
2. A.R. (A/C)
3. A.R. (Store Purchase Section)
4. Notice Board
5. Website Administrator, IIT Delhi
6. Office copy

SCHEDULE

1	Name of organisation	:	Indian Institute of Technology Delhi
2	Tender / Quotation type (open / limited / EOI / auction / single)	:	Open
3	Tender / Quotation category (services / goods / works)	:	Goods & Works
4	Type of Contract (work / supply / auction / service / buy / empanelment / sell)	:	Work & Supply
5	Form of contract (IITD – 7/8)	:	IITD – 8
6	Work Category (civil / electrical / fleet management / computer systems)	:	Electrical
7	Is multi-currency allowed?	:	No
8	Date of publishing / issue / start	:	19-12-2024 at 15.00 Hrs.
9	Document download start date	:	19-12-2024 at 15.00 Hrs.
10	Document download end date	:	26-12-2024 at 17.00 Hrs.
11	Date & time of pre-bid meeting	:	No pre-bid meeting be held
12	Venue of pre-bid meeting	:	Not applicable
13	Last date & time of uploading of bids	:	Upto 3 PM of 26-12-2024
14	Date & time of opening of Technical Bids	:	27-12-2024 after 3 PM
15	Earnest Money Deposit (EMD) Rs.	:	2,93,219.00 (No exemption allowed)
16	Mode of payment of EMD	:	Can be paid through RTGS/NEFT. IIT Delhi Bank details are as under: Name of the Bank A/C : IITD Revenue Account SBI A/C No. : 10773572622 Name of the Bank : State Bank of India, IIT Delhi, Hauz Khas, New Delhi-110016 IFSC Code : SBIN0001077 MICR Code : 110002156 Swift No. : SBININBB547 (This is mandatory that UTR Number is provided in the on-line quotation/bid. (Kindly refer to the UTR Column of the Declaration

			Sheet at Annexure-1)
17	Bid without EMD / Non-submission of original DD	:	To be considered as UNRESPONSIVE and bid shall summarily be rejected
18	No. of bids / covers (1 / 2 / 3 / 4)	:	2
19	Address for communication	:	Assistant Executive Engineer-in-charge, AC Division , Works Department, IIT Delhi, Hauz Khas, New Delhi – 110016
20	Contact No.	:	011 2659 1746
21	e-mail address for communication	:	a26984@admin.iitd.ac.in ; pradipk@admin.iitd.ac.in

INSTRUCTIONS FOR ONLINE BID SUBMISSION

As per the directives of Department of Expenditure, this quotation / tender document has been published on the Central Public Procurement Portal (URL: <http://eprocure.gov.in/eprocure/app>). The bidders are required to submit softcopies of their bids electronically on the CPP portal, using valid Digital Signature Certificates (DSC). 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.

More information useful for submitting online bids on the CPP portal may be obtained at <http://eprocure.gov.in/eprocure/app>

REGISTRATION

1. Bidders are required to enrol on the e-procurement module of the Central Public Procurement portal (URL: <http://eprocure.gov.in/eprocure/app>) by clicking on the link, "click here to enrol". Enrolment on the CPP portal is free of charge.
2. As part of the enrolment process, the bidders will be required to choose a unique user name and assign a password for their accounts.
3. Bidders are advised to register their valid e-mail address and mobile number as part of the registration process. These would be used for any communication from the CPP Portal.
4. Upon enrolment, the bidders will be required to register their valid Digital Signature Certificate (class 2 or class 3 certificates with signing key usage) issued by any certifying authority recognised by CCA India (e.g. Sify / TCS / nCode / eMudhra etc.) with their profile.

5. Only one valid DSC should be registered by a bidder. Please note that bidders are responsible to ensure that they do not lend their DSCs to others which may lead to misuse.
6. Bidder then logs into the site through the secured log-in by entering their user ID / password and the password of the DSC / eToken.

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, organisation 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 organisation name, form of contract, location, date, other keywords etc. to search for a tender published on the CPP portal.
2. Once the bidders have selected the tenders they are interested in, they may download the required documents / tender schedules. The 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.
3. The bidder should make a note of the unique Tender ID assigned to each other, in case they want to obtain any clarification / help from the Helpdesk.

PREPARATION OF BIDS

1. Bidder should take into account any corrigendum published on the tender document before submitting their bids.
2. Please go through the tender advertisement and the tender document carefully to understand the documents required to be submitted as part of the bids. Please note the number of covers in which the bid documents have to be submitted. Any deviations from these may lead to rejection of the bids.
3. 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 formats. Bid documents may be scanned with 100 dpi with black & white option.
4. To avoid the time and effort required in uploading the same set of standard documents which 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’s certificates, etc.) has been provided to the bidders. Bidders can use “My Space” 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.

SUBMISSION OF BIDS

1. Bidder should log into the site well in advance for bid submission so that he / she 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.
2. The bidder has to digitally sign and upload the required bid documents one by one as indicated in the tender document.
3. Bidder has to select the payment option as “on-line” to pay the tender fee / EMD as applicable and enter details of the instrument. Whenever, EMD / Tender fees is sought, bidders need to pay the tender fee and EMD separately on-line through RTGS (Refer to Schedule, Page no. 3)
4. A standard BOQ Format has been provided with the tender document to be filled by all the bidders. Bidders are requested to note that they should necessarily submit their financial bids in the format provided and no other format is acceptable. 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 online, without changing the filename. If the BOQ file is found to be modified by the bidder, the bid will be rejected.

OR

In some cases financial bids can be submitted in PDF format as well (in lieu of BOQ).

5. The server time (which is displayed on the bidders' dashboard) will be considered as the standard time 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 unauthorised 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.
7. The uploaded tender documents become readable only after the tender opening by the authorised bid openers.
8. Upon the successful and timely submission of bids, 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. Kindly add scanned PDF of all relevant documents in a single PDF file of compliance sheet.

ASSISTANCE TO BIDDERS

1. Any queries relating to tender document and the terms and conditions contained therein should be addressed to the tender inviting authority for a tender or the relevant contact person indicated in the tender.
2. Any queries relating to the process of online bid submission or queries relating to CPP portal in general may be directed to the 24 x 7 CPP Portal Help Desk. The contact number of the helpdesk is 18002337315.

GENERAL INSTRUCTIONS TO THE BIDDERS

1. The tenders will be received online through portal <https://eprocure.gov.in/eprocure/app>. In the technical bids, the bidders are required to upload all the documents in PDF format.
2. Possession of a valid class II / III Digital Signature Certificate (DSC) in the form of smart card / e-token in the company's name is a prerequisite for registration and participating in the bid submission activities through <https://eprocure.gov.in/eprocure/app>. Digital Signature Certificates can be obtained from the authorised certifying agencies, details of which are available in the website <https://eprocure.gov.in/eprocure/app> under the link "Information about DSC".
3. Tenderers are advised to follow the instructions provided in the "Instructions to the tenderer" for the e-submission of the bids online through the Central Public Procurement Portal for e-procurement at <https://eprocure.gov.in/eprocure/app>.

INFORMATION & INSTRUCTION TO BIDDERS FOR E-TENDERING

Assistant Executive Engineer-in-charge, AC Division, Indian Institute of Technology Delhi, Hauz Khas, New Delhi – 110016, Ph. No. 011-2659 1746 on behalf of Board of Governors invites online **Item Rate Tender** from approved and eligible contractors of CPWD and those of appropriate list of M.E.S., BSNL, Railway dealing with E&M maintenance work in two bid system as per details given below:

Sr. No.	NIT No.	Name of Work & Location	Estimated cost put to bid (Rs.)	Earnest money (Rs.)	Period of completion	Last date & time of submission of bid	Time & date of opening of Technical Bid	Time & date of opening of Financial Bid
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)

1	0725/109/IITD/SNP(E&M)/ 2024-25	Round the clock Operation & Maintenance of E & M Services of Sonipat Campus of IIT Delhi	1,46,60,941.00	2,93,219.00 (No exemption allowed)	12 months	Upto 3 PM of 26-12-2024	27-12-2024 after 3 PM	To be decided after assessing Technical Bids
---	------------------------------------	---	----------------	---------------------------------------	-----------	-------------------------	-----------------------	---

1. The successful bidder shall be required to submit a performance guarantee of 5% of the tendered amount in the form of Bank Guarantee or F.D.R. from a Nationalized / Scheduled Bank or direct on-line transfer to IITD revenue Account within fifteen days of issue of letter of intent before award of work. In case of failure by the Contractor to submit the performance guarantee within the specified period, full earnest money will be forfeited by the Institute and the tender shall be treated as null and void. EMD shall be refunded after submission of PBG. **The performance guarantee shall be initially valid up to the stipulated date of completion (i.e. 12 months) plus 180 days beyond that.**
2. **Earnest money (EMD)** shall have to be deposited / submitted as stipulated in the schedule.
3. Contractors who fulfil the following requirements shall be eligible to apply. Joint ventures are not accepted.
 - a. Should have satisfactorily completed the works as mentioned below during the last Seven years ending **last day of the month previous to one in which tenders are invited.**
 - i. **Three** similar works each costing not less than **Rs.58,64,000.00**, or **two** similar works each costing not less than **Rs.87,97,000.00**, or one similar work costing not less than **Rs.1,17,29,000.00**.
4. The value of executed work 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 day of submission of bids.
5. **Similar work means: “Operation and Maintenance of Electrical & Mechanical Services in Buildings”.**
6. **Work means** work done with some Central Government Department / State Government Department / Central Autonomous Body / *State Autonomous Body* / Central Public Sector Undertaking / *State Public Sector Undertaking* / *City Development Authority* / *Municipal Corporation of City formed under any Act by Central / State Government and published in Central / State Gazette* / any Public Authority.

7. Completion certificates are required to be got issued by an officer not below the rank of Executive Engineer of similar works completed by the Firm. The work experience certificates submitted by the bidders shall clearly indicate that:
 - a. The similar work executed shall be **as per '5' above**
 - b. The completed cost of the work
 - c. Actual date of completion of the work
8. IITD is committed to follow the principle of transparency, equity, and competitiveness in public procurement. Before submission of bid, **each bidder should sign integrity pact at respective places** and submit the bid. **If duly signed integrity pact is not submitted by bidder, such bid shall not be considered.**
9. **The intending bidder must read the terms and conditions [both commercial & Additional] & IITD - 6 carefully** which will be the part of the Contract. He should only submit his bid if he considers himself eligible and he is in possession of all the documents required.
10. Information and Instructions for bidders posted on website shall form part of bid document.
11. The bid document consisting of plans, specifications, the schedule of quantities of various types of items to be executed and the set of terms and conditions of the contract to be complied with and other necessary documents can be seen and downloaded from website e-procure.gov.in free of cost.
12. But the bid can only be submitted after submission/uploading of EMD as prescribed in the schedule.
13. Copy of all mandatory documents as desired in the NIT shall be scanned and up-loaded to the e-Tendering website within the period of bid submission. During scrutiny of technical bids, if required, bidders may be asked to submit original documents for cross checking. However, certified / original copy of all the scanned and up-loaded documents shall have to be submitted by the lowest bidder only within a week physically in the office of the tender inviting authority.
14. Online bid documents submitted by intending bidders shall be opened only of those bidders, who has submitted prescribed EMD, and other documents scanned and uploaded are found in order.
15. Those contractors not registered on the website mentioned above, are required to get registered beforehand. Bidders should refer "Instruction for Online Bid Submission" given earlier for further assistance.
16. When bids are invited in two / three stages systems and if it is desired to submit revised financial bid it shall be mandatory to submit revised financial bid. If not submitted, then the bid submitted earlier shall become invalid.
17. The department reserves the right to reject any prospective application without assigning any reason and to restrict the list of qualified contractors to any number deemed suitable by it, if too many bids are received satisfying the laid down criterion.
18. Contractors must ensure to quote rate of each item.

19. The bid submitted shall become invalid if:

- a. The bidder is found ineligible.
- b. The bidder does not upload scanned copies of all the documents stipulated in the bid document.
- c. 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 / accepting authority.
- d. 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.
- e. EMD not deposited / submitted as specified.

20. Equipment to be supplied, if any, shall satisfy Class-1 criteria. 'Class – 1 Local Supplier' means a supplier or service provider, whose goods, services or works offered for procurement has local content equal to or more than 50% as defined under Order No. P-45021/2/2017-PP(BE-II) dated 04-06-2020 issued by Department for Promotion of Industry and Internal Trade (Public Procurement Section), Ministry of Commerce and Industry, Govt of India.

- a. 'Local Content' means the amount of value added in India which shall unless and otherwise prescribed by the nodal ministry, be the total value of the item procured (excluding net domestic indirect taxes) minus the value of imported content in the item (including all domestic duties) as a proportion of the total value, in percent.
- b. For the purpose of verification of 'Local Content', the Class-1 Local Supplier / Service Provider at the time of bidding, tender or solicitation shall be required to indicate percentage of local content and provide self-certification that the items offered meet the local content requirement for Class – 1 Local Supplier. They shall also give details of the location(s) at which the local value addition is made.
- c. In cases of procurement for a value in excess of 10 crore, the Class – 1 Local Supplier shall be required to provide a certificate from the statutory auditor or cost auditor of the company (in case of the companies) or from a practicing cost accountant or practicing chartered accountant (in respect of suppliers other than companies) giving the percentage of local content.
- d. Nodal Ministries may constitute committees with internal and external experts for independent verification of self-certifications and auditor's / accountant's certificates on random basis and in the case of complaints.
- e. False declarations will be in breach of Code of Integrity under rule 175(1)(i)(h) of the General Financial Rules for which a bidder or its successors can be debarred for upto two years as per Rule 151 (iii) of the General Financial Rules along with such other actions as may be permissible under law.

List of MANDATORY DOCUMENTS to be scanned and uploaded within the period of bid submission:

Sr. No.	:	Details of Document
1	:	Annexure – 1 duly filled in and got signed by the bidder
2	:	Proof of online EMD deposition
3	:	Certificate of work experience as desired (vide clauses 3 to 7 above)
4	:	<p>Certificate of GST Registration, if already obtained by the bidder.</p> <p style="text-align: center;">If the bidder has not obtained GST registration as applicable, then he shall scan and upload following undertaking alongwith bid documents. <i>“If work is awarded to me, I/we shall obtain GST registration certificate as applicable within one month from the date of award letter or before release of any payment by IIT Delhi, whichever is earlier, failing which I/we shall be responsible for any delay in payments which will be due towards me/us on</i></p>

		<i>account of the work executed and/or for any action taken by IIT Delhi or GST department in this regard.”</i>
5	:	Affidavit as per provision of the clause 1.2.2 of IITD-6 vide page 13 (To be submitted on <u>stamp paper</u> (not less than rupees ten) and <u>date of affidavit and purchase of stamp paper shall not be earlier</u> than the publication of NIT. <u>NIT number, Name of work</u> shall invariably be written on the 1st page of the Stamp Paper)
6	:	Acceptance to execute INTEGRITY PACT (see integrity pact)
7	:	IITD 7 / 8 duly signed
8	:	EPFO & ESIC registration with upto date challan (challan shall be not older than one month from the month on which the tender is invited)
9	:	Valid Electrical Licence in the name of the contractor. <i>if the bidder does not possess electrical licence in his own name, he shall have to submit an undertaking on their letter head and the bidder shall scan and upload following undertaking along with other bid documents.</i> a. <i>“I/We undertake that, if I/we do not possess in my/our name a valid electrical license as required, I/we shall associate an agency having such a licence for execution of work which requires such a licence”.</i>
10	:	Valid Enlistment Order of the Contractor
11	:	Any other document as specified

Note:

- Hard copies of documents are to be submitted as per clause 9.1 of IITD-6
- Original copies of documents including Affidavit are to be submitted for verifications as and when demanded by the tender inviting authority

**Assistant Executive Engineer in-charge, AC Division
For & on Behalf of BOG, IIT Delhi**

CPWD/IITD – 6

**INDIAN INSTITUTE OF TECHNOLOGY DELHI
NOTICE INVITING E-TENDER**

- 1.0 Item rate tenders are invited on behalf of The Board of Governors, IIT Delhi, Hauz Khas, New Delhi - 110016 from approved and eligible contractors of CPWD and those of appropriate list of M.E.S., BSNL, Railway dealing with E&M maintenance work in two bid system as per details given below for the work of **Round the clock Operation & Maintenance of E & M Services of Sonipat Campus of IIT Delhi**. The enlistment of the contractors should be valid on the last date of submission of bids. In case the last date of submission of bids is extended, the enlistment of the contractor should be valid on the original date of submission of bids.
- 1.1 The work is estimated to cost **Rs.1,46,60,941.00**. This estimate, however, is given merely as a rough guide.

- 1.2 Intending bidder is eligible to submit the bid provided he has definite proof from the appropriate authority, which shall be to the satisfaction of the competent authority, of having satisfactorily completed similar works of magnitude specified below:-
- 1.2.1 Criteria of eligibility for submission of bid documents: Conditions for intending bidders / contractors**
- 1.2.1.1 **Three** similar works each costing not less than **Rs.58,64,000.00**, or **two** similar works each costing not less than **Rs.87,97,000.00**, or one similar work costing not less than **Rs.1,17,29,000.00** during the last 7 years ending last day of the month previous to the one in which tenders are invited. The value of executed work 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 last date of submission of bid.
- 1.2.2 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 IIT Delhi 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)”*
- 2.0** Agreement shall be drawn with the successful bidders on prescribed Form No. IITD 7/8 which is available as IIT Delhi Publication. Bidders shall quote their rates as per various terms and conditions of the said form which will form part of the agreement.
- 3.0** The time allowed for carrying out the work is **12 months** 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 bid documents.
- 4.0** The site for the work is available.
- 5.0** The bid document consisting of plans, specifications, the schedule of quantities of various types of items to be executed and the set of terms and conditions of the contract to be complied with and other necessary documents except Standard General Conditions of Contract Form can be seen from the web site **cpwd.gov.in**.
- 6.0** After submission of the bid the contractor can re-submit revised bid any number of times but before last time and date of submission of tender as notified.
- 7.0** While submitting the revised bid, contractor can revise the rate of one or more item(s) any number of times (he needs not re-enter rate of all the items) but before last time and date of submission of tender as notified.
- 8.0** If it is desired to submit revised financial bid then it shall be mandatory to submit revised financial bid. If not submitted then the tender submitted earlier shall become invalid.
- 9.0** EMD shall have to be deposited / submitted as stipulated in the schedule of the NIT.

- 9.1 Copy of all 'mandatory documents' and other documents as specified in the press notice shall be scanned and uploaded to the e-tendering website within the period of bid submission. **However, original affidavit and certified copies of all the scanned and uploaded documents as specified in press notice shall have to be submitted by the lowest bidder only within a week physically in the office of tender opening authority. Original copies of other documents are also to be shown for scrutiny and verifications by the tender opening / accepting authority.**
- 10.0 The bid submitted shall become invalid if:**
- 10.1 The bidder is found ineligible.
- 10.2 The bidder does not upload scanned copies of all the documents stipulated in the bid document.
- 10.3 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 / accepting authority.
- 10.4 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.
- 10.5 EMD not deposited / submitted as specified.
- 11.0** The contractor whose bid is accepted will be required to furnish **performance guarantee** of 5% (Five Percent) of the bid amount within the period specified in Schedule E. 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 or Direct on-line transfer to IITD Revenue Account. In case the contractor fails to deposit/submit 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.
- 12.0** 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 subsoil (so far as is practicable), the form and nature of the site, the means of access to the site, the accommodation they may require and in general shall themselves obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect their bid. A bidder shall be deemed to have full knowledge of the site whether he inspects it or not and no extra charge consequent on any misunderstanding or otherwise shall be allowed. 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.

- 13.0** The competent authority on behalf of the Board of Governors does not bind itself to accept the lowest or any other bid and reserves to itself the authority to reject any or all the bids received without the assignment of any reason. All bids in which any of the prescribed condition is not fulfilled or any condition including that of conditional rebate is put forth by the bidder shall be summarily rejected.
- 14.0** Canvassing whether directly or indirectly, in connection with bidders is strictly prohibited and the bids submitted by the contractors who resort to canvassing will be liable for rejection.
- 15.0** The competent authority on behalf of the Board of Governors reserves to himself the right of accepting the whole or any part of the bid and the bidder shall be bound to perform the same at the rate quoted.
- 16.0** The contractor shall not be permitted to bid for works in the IITD 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 IIT Delhi. Any breach of this condition by the contractor would render him liable to be debarred from bidding process in future in IIT Delhi.
- 17.0** 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 liable to be cancelled, if, either the contractor or any of his employees is found any time to be such a person who had not obtained the permission of the Government of India as aforesaid before submission of the bid or engagement in the contractor's service.
- 18.0** **The bids for the work shall remain open for acceptance for a period of 75 (seventy five) days from the date of opening of technical bids. Further**
- 18.1** 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.
- 18.2** 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.
- 18.3** In case of forfeiture of earnest money as prescribed in para (18.1) and (18.2) above, the bidders shall not be allowed to participate in the rebidding process of the same

work.

- 19.0** This notice inviting bid shall form a part of the contract document. The successful bidder / contractor, on acceptance of his bid by the Accepting Authority shall **within fifteen days** from the stipulated date of start of the work, sign the contract consisting of:-
- 19.1 The Notice Inviting Bid, all the documents including additional conditions, specifications and drawings, if any, forming part of the bid as uploaded at the time of invitation of bid and the rates quoted online at the time of submission of bid and acceptance thereof together with any correspondence leading thereto.
- 19.2 Standard IITD Form –7/8 or other Standard IITD Form as applicable.
- 20.0** **Integrity Pact:** The contractor shall download the Integrity Pact, which is a part of tender documents, affix his signature and upload the same while submitting online bids. In the event of his failure to sign and upload the Integrity Pact along with other bid documents, his bid shall be rejected.

INTEGRITY PACT

To

.....,

C ... Nil I Nil O Nil

.....,
.....

Sub: NIT No. 0725/109/IITD/SNP(E&M)/2024-25 for the work of “Round the clock Operation & Maintenance of E & M Services of Sonipat Campus of IIT Delhi”

Dear Sir,

It is hereby declared that IIT Delhi (IITD) is committed to follow the principle of transparency, equity and competitiveness in public procurement.

The subject Notice Inviting Tender (NIT) is an invitation to offer made on the condition that the Bidder will sign the Integrity Agreement, which is an integral part of the tender/bid documents, failing which the tender/bidder will stand disqualified from the tendering process and the bid of the bidder would be summarily rejected.

This declaration shall form part and parcel of the Integrity Agreement and signing of the same shall be deemed as acceptance and signing of the Integrity Agreement on behalf of the IITD.

Yours faithfully,

**Assistant Executive Engineer in-charge, AC Division
For & on Behalf of BOG, IIT Delhi**

[TO BE SUBMITTED DULY SIGNED BY THE BIDDER ALONGWITH BID DOCUMENTS]

To

Assistant Executive Engineer-in-charge, AC Division,

C ... Nil I Nil O Nil

IIT Delhi, Hauz Khas,
New Delhi – 110016

Subject: Submission of Bid for the work of **“Round the clock Operation & Maintenance of E & M Services of Sonipat Campus of IIT Delhi”**

Dear Sir,

I / We acknowledge that IIT Delhi is committed to follow the principles thereof as enumerated in the Integrity Agreement enclosed with the tender/bid document.

I / We agree that the Notice Inviting Tender (NIT) is an invitation to offer made on the condition that I / We will sign the enclosed integrity Agreement, which is an integral part of tender / bid documents, failing which I / We will stand disqualified from the tendering process. I / We acknowledge that **THE MAKING OF THE BID SHALL BE REGARDED AS AN UNCONDITIONAL AND ABSOLUTE ACCEPTANCE** of this condition of the NIT.

I / We confirm acceptance and compliance with the Integrity Agreement in letter and spirit and further agree that execution of the said Integrity Agreement shall be separate and distinct from the main contract, which will come into existence when tender/bid is finally accepted by IITD. I / We acknowledge and accept the duration of the Integrity Agreement, which shall be in the line with Article 1 of the enclosed Integrity Agreement.

I / We acknowledge that in the event of my/our failure to sign and accept the Integrity Agreement, while submitting the tender/bid, IITD shall have unqualified, absolute and unfettered right to disqualify the tenderer /bidder and reject the tender/bid in accordance with terms and conditions of the tender/bid.

Yours faithfully,

(Duly signed by authorized signatory of the Bidder)

(To be signed by the bidder and same signatory competent / authorized to sign the relevant contract on behalf of IITD)

INTEGRITY AGREEMENT

C ... Nil I Nil O Nil

This Integrity Agreement is made at on this day of..... 20.....

BETWEEN

The Board of Governors, IIT Delhi, Hauz Khas, New Delhi - 16 represented through **Assistant Executive Engineer-in-charge, AC Division**, IIT Delhi, (Hereinafter referred as the 'Principal/Owner', 'Principal/Owner', which expression shall unless repugnant to the meaning or context hereof include its successors and permitted assigns)

AND

.....
.....
.....

(Name and Address of the Individual/firm/Company)

Through.....

(Hereinafter referred

(Details of duly authorized signatory)

to as the "**Bidder/Contractor**" and which expression shall unless repugnant to the meaning or context hereof include its successors and permitted assigns)

PREAMBLE

WHEREAS the Principal / Owner has floated the Tender (NIT No. 0725/109/IITD/SNP(E&M)/2024-25) (hereinafter referred to as "**Tender/Bid**") and intends to award, under laid down organizational procedure, contract for "**Round the clock Operation & Maintenance of E & M Services of Sonipat Campus of IIT Delhi**" (Name of work) hereinafter referred to as the "**Contract**".

AND WHEREAS the Principal/Owner values full compliance with all relevant laws of the land, rules, regulations, economic use of resources and of fairness/transparency in its relation with its Bidder(s) and Contractor(s) AND WHEREAS to meet the purpose aforesaid both the parties have agreed to enter into this Integrity Agreement (hereinafter referred to as "**Integrity Pact**" or "**Pact**"), the terms and conditions of which shall also be read as integral part and parcel of the Tender/Bid documents and Contract between the parties.

NOW, THEREFORE, in consideration of mutual covenants contained in this Pact, the parties hereby agree as follows and this Pact witnesses as under:

ARTICLE 1: COMMITMENT OF THE PRINCIPAL / OWNER

- 1. The Principal/Owner commits itself to take all measures necessary to prevent corruption and to observe the following principles:

C ... Nil I Nil O Nil

- 1.1. No employee of the Principal / Owner, personally or through any of his / her family members, will in connection with the Tender, or the execution of the Contract, demand, take a promise for or accept, for self or third person, any material or immaterial benefit which the person is not legally entitled to.
 - 1.1.1. The Principal/Owner will, during the Tender process, treat all Bidder(s) with equity and reason. The Principal/Owner will, in particular, before and during the Tender process, provide to all Bidder(s) the same information and will not provide to any Bidder(s) confidential / additional information through which the Bidder(s) could obtain an advantage in relation to the Tender process or the Contract execution.
 - 1.1.2. The Principal/Owner shall Endeavour to exclude from the Tender process any person, whose conduct in the past has been of biased nature.
2. If the Principal/Owner obtains information on the conduct of any of its employees which is a criminal offence under the Indian Penal code (IPC)/Prevention of Corruption Act, 1988 (PoC Act) or is in violation of the principles herein mentioned or if there be a substantive suspicion in this regard, the Principal/Owner will inform the Chief Vigilance Officer and in addition can also initiate disciplinary actions as per its internal laid down policies and procedures.

ARTICLE 2: COMMITMENT OF THE BIDDER(S) / CONTRACTOR(S)

1. It is required that each Bidder/Contractor (including their respective officers, employees and agents) adhere to the highest ethical standards, and report to the Government / Department all suspected acts of **fraud or corruption or coercion or collusion** of which it has knowledge or becomes aware, during the tendering process and throughout the negotiation or award of a contract.
2. The Bidder(s)/Contractor(s) commits himself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the Tender process and during the Contract execution:
 - 2.1. The Bidder(s)/Contractor(s) will not, directly or through any other person or firm, offer, promise or give to any of the Principal/Owner's employees involved in the Tender process or execution of the Contract or to any third person any material or other benefit which he/she is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the Tender process or during the execution of the Contract.
 - 2.2. The Bidder(s)/Contractor(s) will not enter with other Bidder(s) into any undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to cartelize in the bidding process.
 - 2.3. The Bidder(s) / Contractor(s) will not commit any offence under the relevant IPC/PoC Act. Further the Bidder(s) / Contractor(s) will not use improperly, (for the purpose of competition or personal gain), or pass on to others, any information or documents provided by the Principal / Owner as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.
 - 2.4. The Bidder(s) / Contractor(s) of foreign origin shall disclose the names and addresses of agents / representatives in India, if any. Similarly Bidder(s) / Contractor(s) of Indian Nationality shall disclose names and addresses of foreign agents/representatives, if any.

Either the Indian agent on behalf of the foreign principal or the foreign principal directly could bid in a tender but not both. Further, in cases where an agent participate in a tender on behalf of one manufacturer, he shall not be allowed to quote on behalf of another manufacturer along with the first manufacturer in a subsequent/parallel tender for the same item.

- 2.5. The Bidder(s)/Contractor(s) will, when presenting his bid, disclose any and all payments he has made, is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the Contract.
3. The Bidder(s)/Contractor(s) will not instigate third persons to commit offences outlined above or be an accessory to such offences.
4. The Bidder(s)/Contractor(s) will not, directly or through any other person or firm indulge in fraudulent practices **means a wilful misrepresentation or omission of facts or submission of fake/forged documents in order to induce public official to act in reliance thereof, with the purpose of obtaining unjust advantage by or causing damage to justified interest of others and/or to influence the procurement process to the detriment of the Government interests.**
5. The Bidder(s)/Contractor(s) will not, directly or through any other person or firm use Coercive Practices (means the act of obtaining something, compelling an action or influencing a decision through intimidation, threat or the use of force directly or indirectly, where potential or actual injury may befall upon a person, his/ her reputation or property to influence their participation in the tendering process).

ARTICLE 3: CONSEQUENCES OF BREACH

Without prejudice to any rights that may be available to the Principal / Owner under law or the Contract or its established policies and laid down procedures, the Principal/Owner shall have the following rights in case of breach of this Integrity Pact by the Bidder(s)/Contractor(s) and the Bidder/ Contractor accepts and undertakes to respect and uphold the Principal/Owner's absolute right:

1. If the Bidder(s)/Contractor(s), either before award or during execution of Contract has committed a transgression through a violation of Article 2 above or in any other form, such as to put his reliability or credibility in question, the Principal/Owner after giving 14 days' notice to the contractor shall have powers to disqualify the Bidder(s)/Contractor(s) from the Tender process or terminate/determine the Contract, if already executed or exclude the Bidder/Contractor from future contract award processes. The imposition and duration of the exclusion will be determined by the severity of transgression and determined by the Principal/Owner. **Such exclusion may be forever or for a limited period as decided by the Principal/Owner.**
2. **Forfeiture of EMD/Performance Guarantee/Security Deposit:** If the Principal/Owner has disqualified the Bidder(s) from the Tender process prior to the award of the Contract or terminated/determined the Contract or has accrued the right to terminate/determine the Contract according to Article 3(1), the Principal/Owner apart from exercising any legal rights that may have accrued to the Principal/Owner, may in its considered opinion forfeit the entire amount of Earnest Money Deposit, Performance Guarantee and Security Deposit of the Bidder/Contractor.
3. **Criminal Liability:** If the Principal/Owner obtains knowledge of conduct a Bidder or

Contractor, or of an employee or a representative or an associate of a Bidder or Contractor which constitutes corruption within the meaning of IPC Act, or if the Principal / Owner has substantive suspicion in this regard, the Principal/Owner will inform the same to law enforcing agencies for further investigation.

ARTICLE 4: PREVIOUS TRANSGRESSION

1. The Bidder declares that no previous transgressions occurred in the last 5 years with any other Company in any country confirming to the anticorruption approach or with Central Government or State Government or any other Central/State Public Sector Enterprises in India that could justify his exclusion from the Tender process.
2. If the Bidder makes incorrect statement on this subject, he can be disqualified from the Tender process or action can be taken for banning of business dealings/ holiday listing of the Bidder/Contractor as deemed fit by the Principal/ Owner.
3. If the Bidder/Contractor can prove that he has resorted / recouped the damage caused by him and has installed a suitable corruption prevention system, the Principal/Owner may, at its own discretion, revoke the exclusion prematurely.

ARTICLE 5: EQUAL TREATMENT OF ALL BIDDERS/CONTRACTORS/SUBCONTRACTORS

1. The Bidder(s)/Contractor(s) undertake(s) to demand from all subcontractors a commitment in conformity with this Integrity Pact. The Bidder/Contractor shall be responsible for any violation(s) of the principles laid down in this agreement/Pact by any of its Sub-contractors/sub-vendors.
2. The Principal/Owner will enter into Pacts on identical terms as this one with all Bidders and Contractors.
3. The Principal/Owner will disqualify Bidders, who do not submit, the duly signed Pact between the Principal/Owner and the bidder, along with the Tender or violate its provisions at any stage of the Tender process, from the Tender process.

ARTICLE 6: DURATION OF THE PACT

1. This Pact begins when both the parties have legally signed it. It expires for the Contractor/Vendor 6 months after the completion of work under the contract or till the continuation of defect liability period, whichever is more and for all other bidders, till the Contract has been awarded.
2. If any claim is made/lodged during the time, the same shall be binding and continue to be valid despite the lapse of this Pacts as specified above, unless it is discharged/determined by the Competent Authority of IIT Delhi.

ARTICLE 7: OTHER PROVISIONS

1. This Pact is subject to Indian Law, place of performance and jurisdiction is the Head Quarters of the Division of the Principal/Owner, who has floated the Tender.
2. Changes and supplements need to be made in writing. Side agreements have not been made.

- 3. If the Contractor is a partnership or a consortium, this Pact must be signed by all the partners or by one or more partner holding power of attorney signed by all partners and consortium members. In case of a Company, the Pact must be signed by a representative duly authorized by Board Resolution.
- 4. Should one or several provisions of this Pact turn out to be invalid; the remainder of this Pact remains valid. In this case, the parties will strive to come to an agreement to their original intensions.
- 5. It is agreed term and condition that any dispute or difference arising between the parties with regard to the terms of this Integrity Agreement / Pact, any action taken by the Owner/Principal in accordance with this Integrity Agreement/ Pact or interpretation thereof shall not be subject to arbitration.

ARTICLE 8: LEGAL AND PRIOR RIGHTS

- 1. All rights and remedies of the parties hereto shall be in addition to all the other legal rights and remedies belonging to such parties under the Contract and/or law and the same shall be deemed to be cumulative and not alternative to such legal rights and remedies aforesaid. For the sake of brevity, both the Parties agree that this Integrity Pact will have precedence over the Tender/Contact documents with regard any of the provisions covered under this Integrity Pact.

IN WITNESS WHEREOF the parties have signed and executed this Integrity Pact at the place and date first above mentioned in the presence of following witnesses:

.....
(For and on behalf of Principal / Owner)

.....
(For and on behalf of Bidder / Contractor)

WITNESSES:

- 1.
(signature, name and address)
- 2.
(signature, name and address)

Place:

Dated :

INDIAN INSTITUTE OF TECHNOLOGY DELHI
HAUZ KHAS, NEW DELHI - 110016

Percentage Rate Tender / Item Rate Tender & Contract for Works

Tender for the work of “Round the clock Operation & Maintenance of E & M Services of Sonipat Campus of IIT Delhi”

1. To be submitted online by **Upto 3 PM of 26-12-2024**
2. To be opened on **27-12-2024 after 3 PM** online

e-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 Board of Governors, IIT Delhi 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.

We agree to keep the tender open for seventy-five (75) days from the date of opening of technical bid and not to make any modification in its terms and conditions.

A sum of **Rs. 2,93,219.00** is hereby deposited in IIT Delhi Revenue Account No. 10773572622 as earnest money and the proof of deposition has been scanned and uploaded with the Technical Bid. If I / We, fail to furnish the prescribed performance guarantee within prescribed period I / We agree that the said The Board of Governors, IIT Delhi, Hauz Khas, New Delhi - 16 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 the work as specified, I / We agree that The Board of Governors, IIT Delhi, Hauz Khas, New Delhi - 16 or the successors in office shall without prejudice to any other right or remedy available in law, be at liberty to forfeit the said earnest money and the performance guarantee absolutely, otherwise the said earnest money shall be retained by him towards security deposit 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 & 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 IIT Delhi 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 of the State.

Dated:

Signature of Contractor

Witness:

Postal Address

Address:

Occupation:

ACCEPTANCE

The above tender (as modified by you as provided in the letters mentioned hereunder) is accepted by me for an on behalf of The Board of Governors, IIT Delhi, Hauz Khas, New Delhi - 110016 for a sum of (Rupees.....).

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

- (a)
- (b)
- (c)

For & on behalf of Board of Governors, IIT Delhi

Signature

Dated:

Designation

PROFORMA OF SCHEDULES

SCHEDULE "A"

Schedule of Quantities (PWD-3)

SCHEDULE "D"

Extra schedule for specific requirements / documents for the work, if any.

----- NIL -----

SCHEDULE "E"

Reference to General Conditions of Contract: GCC of Maintenance Work 2023 published by CPWD as amended up to last date of submission of bid.

1.	Name of work	:	Round the clock Operation & Maintenance of E & M Services of Sonipat Campus of IIT Delhi
2.	Estimated cost of work (₹)	:	1,46,60,941.00
3.	Earnest Money (₹)	:	2,93,219.00 (to be refunded after receiving performance guarantee)
4.	Performance Guarantee	:	5% (percent) of tendered value
5.	Security Deposit	:	2.5% (percent) of tendered value

SCHEDULE "F"

GENERAL RULES & DIRECTIONS:

Officer inviting tender	:	Assistant Executive Engineer in-charge, AC Division
Maximum percentage for quantity of items of work to be executed beyond which rates are	:	See below

to be determined in accordance with Clauses 12.2 & 12.3	
---	--

DEFINITIONS:

2 (V)	Engineer-in-charge	:	Assistant Executive Engineer in-charge, AC Division
2 (viii)	Accepting authority	:	Superintending Engineer (Electrical)
2 (x)	Percentage on cost of materials and labour to cover all overheads and profits	:	15 percent
2 (xi)	Standard Schedule of Rates	:	Current Market Rate based on Minimum Wages declared by CLC, Govt of India
2 (xii)	Department	:	Estate & Works, IIT Delhi
9 (ii)	Reference to General condition of contract	:	CPWD / IITD Form 7 / 8 as modified and corrected upto date, GCC 2023 for Maintenance work of CPWD with latest modifications

CLAUSE 1

i)	Time allowed for submission of Performance Guarantee from the date of issue of letter of acceptance	:	15 days
ii)	Maximum allowable extension beyond the period provided in (i) above with late fees @0.1% per day of performance guarantee	:	10 days

CLAUSE 2

(i)	Authority for fixing compensation under Clause 2	:	Superintending Engineer (Electrical)
-----	--	---	--------------------------------------

CLAUSE 2A

(i)	Whether Clause 2A shall be applicable	:	No
-----	---------------------------------------	---	----

--	--	--	--

CLAUSE 5

(i)	Number of days from the date of issue of letter of acceptance for reckoning date of start	:	10 days
-----	---	---	---------

TABLE OF MILESTONE(S):

Sr. No.	Description of Milestone (physical)	Time allowed in days (from date of start)	Amount to be with-held in case of non-achievement of milestone
(1)	(2)	(3)	(4)
	--- NOT SPECIFIED ---		

Time allowed for execution of work	:	12 months
---	---	-----------

Authority to decide:	Extension of time	:	Engineer-in-charge
	Rescheduling of milestones	:	Superintending Engineer
	Shifting of date of start in case of delay in handing over of site	:	Engineer-in-charge

CLAUSE 5

Clause applicable 5 / 5A	:	5
--------------------------	---	---

CLAUSE 6

MB applicable: Computerised Measurement Book (CMB) / Electronic Measurement Book (EMB)	:	CMB
--	---	-----

CLAUSE 7

Gross work to be done together with net payment / adjustment of advances for materials collected, if any, since the last such payment for being eligible to interim	:	15 Lakhs
---	---	----------

payment		
---------	--	--

CLAUSE 7A

Whether Clause 7A shall be applicable	:	No
---------------------------------------	---	----

CLAUSE 10A

List of testing equipment to be provided by the contractor at site					
1	Tong Tester	2	Megger	3	Earth Tester
4	NIL	5	NIL	6	NIL

CLAUSE 10B (ii)

Whether Clause 10 B (ii) shall be applicable (Yes / No)	:	No
---	---	----

CLAUSE 10 C

Component of labour expressed as percent of value of work	:	100 Percent
---	---	-------------

CLAUSE 10CC

Whether Clause 10CC shall be applicable	:	Not applicable
---	---	----------------

CLAUSE 11

Specification to be followed for execution of work	:	CPWD General Specifications for Electrical Works with other relevant parts as amended upto date. Minimum Wages Act
--	---	--

CLAUSE 12

12.2	Deviation limit beyond which clauses 12.2 shall apply for building	:	100%
------	--	---	-------------

work / HVAC work		
------------------	--	--

CLAUSE 16

Competent authority for deciding reduced rates	:	Superintending Engineer
--	---	-------------------------

CLAUSE 18

List of mandatory machinery, tools & plants to be deployed by the contractor at site					
1	NIL	2	NIL	3	NIL
4	NIL	5	NIL	6	NIL

CLAUSE 19C

Authority to decide penalty for each default	:	Engineer-in-charge
--	---	--------------------

CLAUSE 19D

Authority to decide penalty for each default	:	Engineer-in-charge
--	---	--------------------

CLAUSE 19G

Authority to decide penalty for each default	:	Engineer-in-charge
--	---	--------------------

CLAUSE 19K

Authority to decide penalty for each default	:	Not applicable
--	---	----------------

CLAUSE 25**Constitution of Dispute Redressal Committee (DRC)**

Conciliator	:	Dean / Associate Dean Infra
Arbitrator Appointing Authority	:	Director

C ... Nil I Nil O Nil

Place of Arbitration	:	IIT Delhi
----------------------	---	-----------

CLAUSE 32**Requirement of Technical Representative(s) and recovery rate**

Sr. No.	Minimum qualification of Technical Representative	Discipline	Designation (Principal / Technical / Technical representative)	Minimum experience	Number	Rate at which recovery shall be made from the contractor in the event of not fulfilling provision of clause 36 (i)	
						Figures	Words
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	Graduate or Diploma Engg.	Electrical or Mechanical	Site Engineer, Billing Engineer	2 years Graduate or 5 years Diploma	1	Rs.15,000/- per month per Representative	Fifteen Thousand

Assistant Engineers retired from Govt. / IIT Delhi 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

Applicability of Clause 38	:	Not applicable
----------------------------	---	----------------

COMMERCIAL AND ADDITIONAL CONDITIONS

1. GENERAL

- 1.1. A good maintenance programme is the key to long system life and ease of serviceability. Maintenance & service should only be carried out by experienced / qualified personnel as desired in the schedule of work. The maintenance and service which are done must be as per specifications and upto the satisfaction of the Engineer-in-charge.
- 1.2. Location: **In IIT Delhi's** off campus at Kundli, Sonipat.
- 1.3. The work shall be executed as per CPWD General Specifications for Electrical Works of relevant parts, as amended upto date, relevant I.E. Rules, BIS/IEC and as per directions of Engineer-in- Charge. These additional specifications/conditions 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 specification and conditions, as the same are to be read along with schedule of quantities for the work.
- 1.4. The tenderer should in his own interest visit the site and get familiarized 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:

- 2.1. **Type of contract:** The work to be awarded by this tender shall be treated as indivisible works contract.
- 2.2. **Submission and opening of Tenders:**
 - 2.2.1. The tender is in two parts:
 - 2.2.1.1. Part-I -Technical cum Un-priced commercial Bid
 - 2.2.1.2. Part-II-Price Bid

- 2.3. The tender shall be submitted online, duly completed as per NIT conditions within period of bid submission.
- 2.4. The tenderers are advised not to deviate from the technical specifications / item, commercial terms and conditions of NIT like terms of payment, guarantee, arbitration clause, escalation etc.
- 2.5. Technical cum un-priced commercial bid only shall be opened on the due date and time in the presence of tenderers or their authorized representative who wish to remain present.
- 2.6. Scrutiny/evaluation of the technical-cum-commercial bid shall be done by the department. In case, it is found that the technical-cum-commercial bid of a tenderer is not in line with NIT specifications/requirements and/or contains too many deviations, the department reserves the right to reject the technical bid of such firms(s) without making any reference to the tenderer(s).
- 2.7. Necessary clarifications required by the department shall have to be furnished by the tenderer within the time given by the department for the same. The tenderer will have to depute his representative to discuss with the officer(s) of the department as and when so desired. In case, in the opinion of the department a tenderer is taking undue long time in furnishing the desired clarifications, his bid will be rejected without making any reference.
- 2.8. After obtaining clarification from all the tenders, the department will intimate the tenders whose technical cum commercial bids are acceptable.
- 2.9. The price bids of only those tenderers shall be opened whose technical bids are found to be technically acceptable. The time and date of opening of price bid shall be fixed after the technical cum unpriced commercial bid is accepted and intimated to them by post/Fax/e-mail.
- 2.10. The department reserves the right to reject any or all the price bids and call for fresh prices/tenders as the case may be without assigning any reason.

3. TERMS OF PAYMENTS

- 3.1. Running Account Payment shall be processed (not earlier than two months from the date of start or last RA bill as the case may be) only after submission of document of payment of wages to the workers and submission of contribution receipts of EPF & ESI of workers as applicable. Bidder should note that necessary documents (PAN card, Cancelled cheque, GST Reg. proof and RTGS mandate form as per prescribed proforma of IIT Delhi) be submitted as soon as the work is awarded to them. Separate Contractor's Code shall be generated in IIT Delhi if the bidder is a new contractor to IIT Delhi ('Code' is perpetual in nature). Payment shall be processed after submission of Invoice and necessary documents / certificates (as mentioned in the NIT). There is a prevailing practice of pre-audit (for total tendered amount more than 6 lakhs) at IIT Delhi before releasing final payment. Bidder shall have to comply all necessary documents as outlined in the Contract as to be desired by the Auditor and or by the Accountant. It may take one to two months in the whole process (from

submission / acceptance of bill in CMB / MB by the contractor upto processing by Accounts section) to release payment subject to quick compliance of all submittals by the contractor. Applicable Taxes shall be got deducted from the bill as per prevailing orders of the Government. 'GST part of the bill' shall be released after submission of proof of payment of GST, i.e. B2B challan, etc. by the contractor or as to be desired by Accounts Department of IIT Delhi.

- 3.2. Income tax, GST, labour cess & other statutory deduction etc. shall be made at source as per the prevalent laws. The deduction of Security Deposit, Income Tax, etc., shall be done after calculation for the above due payment as per clause 3.1 above and net payment shall reduce accordingly.

4. AWARD OF WORK

- 4.1. Work shall be awarded to the successful bidder only after concurrence of the **Auditor of the Internal Audit Section** of the IIT Delhi as per extant Rules of the Institute.

5. SECURITY DEPOSIT

6. Security Deposit shall be deducted from each running bill to the extent of 2.5% of the gross amount payable till the total security deposit becomes 2.5% of the tendered amount. **The security deposit shall be released after completion of work and clearance of all contractual obligations to workers as per regulations.**

7. PERFORMANCE GUARANTEE

- 7.1. The successful tenderer shall submit an irrevocable performance guarantee of 5% of the tendered amount in addition to other deposit mentioned elsewhere in the contract for his proper performance of the contract agreement within 15 days of issue of letter of acceptance of tender. This guarantee shall be in the form of Demand Draft/Pay order of irrevocable bank guarantee bond of any schedule bank or the State Bank of India in the specified perform a of Government Security, fixed deposit receipt pledged in favour of **Registrar, IIT Delhi** or Direct on-line transfer to IITD Revenue Account or as specified in the letter of acceptance of tender. The performance guarantee shall be initially valid up to the stipulated date of completion plus one hundred eighty (180) days. This bank guarantee shall be kept valid till the recording of completion certificate for the work by the competent authority.

8. RATES

- 8.1. The work shall be treated as on works contract basis and the rates tendered shall be for complete items of work inclusive of all taxes, GST (including works contract tax, if any), duties, and levies etc. and all charges for items contingent to the work, risk overhead charges, general liabilities and obligations, etc.

9. COMPLETENESS OF TENDER

- 9.1. All sundry equipments, fitting, 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 specially mentioned in the tender documents or not.

10. COMPLETION PERIOD

10.1. The completion period indicated in the tender documents is for the entire work of planning, deployment of manpower as per duty schedule, supervision, payment of EPF & ESI contributions timely, payment of wages, etc. to the satisfaction of the Engineer-in-charge.

11. VALIDITY

11.1. Tenders shall be valid for acceptance for a period 75 days of days from the date of opening of Technical of bid.

12. COMPLIANCE WITH REGULATIONS AND INDIAN STANDARDS

12.1. 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:

12.1.1. Factories Act

12.1.2. Indian Electricity Rules

12.1.3. B.I.S. & other standards as applicable

12.1.4. Workmen's compensation Act

12.1.5. Statutory norms prescribed by local bodies like fire department, CEA, Power Supply Co. etc.

13. INDEMNITY

13.1. 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 from during the period of erection, construction and putting into operation the equipments and ancillary equipment under the supervision of the successful tenderer in so far as 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.

14. COOPERATION WITH OTHER AGENCIES AND OCCUPANTS OF THE BUILDING

14.1. The successful tenderer shall co-ordinate with other working contractors, if any and other occupants of different offices / Labs, etc., 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 work was not undertaken by the tenderer himself.

15. MOBILIZATION ADVANCE

15.1. No mobilization advance shall be paid for this work.

16. INTERPRETING SPECIFICATION

16.1. In interpreting the specification, the following order of decreasing importance shall be followed in case of contradictions:

16.1.1. Schedule of quantities

16.1.2. Technical Specification

16.1.3. Drawing (if any)

16.1.4. General Specification for Electrical Works of CPWD (relevant Parts)

16.1.5. Relevant BIS or other international code in case BIS code is not available.

17. POLICY OF THE INSTITUTE

17.1. Institute has a policy against **sexual harassment** and is committed to providing an environment free from **sexual harassment of women** at the workplace. Contractor shall have to abide by the policy of the Institute with due diligence. Any violation on the part of the contractor shall be dealt with the extant rules of the Institute.

SPECIAL TERMS AND CONDITIONS

1. That it is expressly understood and agreed between the parties to this Agreement that the persons deployed by the contractor for the services mentioned above shall be the employees of the contractor for all intents and purposes and that the persons so deployed shall remain under the control and supervision of the contractor and in no case, shall a relationship of employer and employee between the said persons and the IITD shall accrue/arise implicitly or explicitly.
2. That on taking over the responsibility of providing Contractor's Worker, the contractor shall formulate the mechanism and duty assignment under intimation to the Engineer-in-charge. Subsequently, the contractor shall review work arrangements from time to time. The contractor shall further be bound by and carry out the directions/instructions given to him by the Engineer-in-charge in this respect from time to time.
3. That the Engineer-in-charge or any other person authorized by him shall be at liberty to carry out surprise checks on the persons so deployed by the contractor in order to ensure that persons deployed by him are doing their duties.
4. That in case of the persons so deployed by the contractor does not come up to the mark or does not perform his/her duties properly or indulges in any unlawful activities or riots or disorderly conduct, the contractor shall immediately withdraw and take suitable action against such persons on the report of the Engineer-in-charge. Further, the contractor shall immediately replace the particular person so deployed on the demand of the Engineer-in-charge, in case of any of the aforesaid acts on the part of the said person.
5. **That the contractor shall particularly abide by the provisions of Central Minimum Wages Act, 1948. Minimum wages shall be paid by the Agency / Contractor at the rate fixed by the Central Govt. from time to time. *Wages for High Skilled Mechanic/Supervisor grade worker is***

Rs.868.00. For Skilled mechanic grade (Electrician / DG Operator / Pump Operator/ HVAC Operator/ Fireman) worker is not less than Rs. 739.00 and Unskilled grade / Helper Rs.526.00 per day per each (as per Order dated 01 Oct 2024 of CLC, Govt of India). However, the contractor will have to pay as per the latest orders of minimum wages of CLC applicable during the contract period to the skilled mechanic grade and helper grade workers. No arrears shall be paid on account of wage revision by CLC during the contract period. The contractor shall take all reasonable precautions to prevent any unlawful, riotous or disorderly conduct or acts of his employees so deployed.

6. Qualification of High Skilled Mechanic/Supervisor should be at least ITI (Two years course) passed with 10 years' experience or Diploma (Three years course) passed with 05 years' experience in Refrigeration and Air conditioning / Electrical / Fitter / Mechanical / Electronics and for Mechanic grade (Electrician / DG Operator / Pump Operator/ HVAC Operator) it is at least ITI (Two years course) passed in Electrical / Refrigeration & Air-conditioner / Mechanical / Fitter / Electronics. For Fireman, Certificate of Fireman is required.
7. That the contractor shall deploy high skilled mechanic, operators/mechanic & helpers as specified in the BOQ in such a way as to be specified by the Engineer-in-charge & they should get weekly rest. The working hour / leave for which the work is taken from them, do not violate relevant provisions of the Act. The contractor shall in all dealings with the persons in his employment have due regard to all recognized festivals, days of rest and religious or other customs. The contractor shall have to pay additional wages for **03 National Holidays (26 Jan, 02 Oct & 15 Aug) to those workers who will be required to continue duty at site as per requirements.**
8. That the contractor shall keep the IITD indemnified against all claims whatsoever in respect of the employees deployed by the contractor. In case any employee of the contractor so deployed enters in dispute of any nature whatsoever, it will be the primarily responsibility of the contractor to contest the same. In case IITD is made party and is supposed to contest the case, IITD will be reimbursed for the actual expenses incurred towards Counsel Fee and other expenses which shall be paid in advance by the contractor to IITD on demand. Further, the contractor shall ensure that no financial or any other liability comes on IITD in this respect of any nature whatsoever and shall keep IITD indemnified in this respect.
9. The Work is to be carried out for stipulated period of time and may be extended further as desired by Engineer-in-charge.
10. The Institute reserves the right to remove any person deployed by the firm, without assigning any reason/notice. This will be without prejudice to the right of the contractor to remove any of his own employees deployed in the Institute.
11. That the contractor shall submit detail of the names, parentage, residential address, age, educational qualifications, experiences, etc. of the persons deployed by him in the premises of the IIT Delhi's Sonipat Campus for the purpose of proper identification & category of the employees of contractor deployed at various points/sections. He shall issue identity cards bearing their photographs / identification, etc. and such employees shall display their identity cards at the time of duty.
12. The contractor shall ensure that the people are punctual and disciplined and remain vigilant in performance of their duties.

13. Total number of manpower is fixed. However, the Institute can increase or decrease the manpower as per requirement in case there is exigencies. **The increase / decrease in manpower would accordingly affect the billing on actual basis.**
14. That the contractor shall be required to maintain **permanent attendance register in addition to Biometric Attendance** at the IITD premises which shall be open for inspection and checking by the authorized officers of the IITD. **For this, contractor shall provide one Biometric machine and Attendance Register centrally inside the IITD Campus before starting the work.**
15. That the contractor shall make the payment of wages, etc. to persons so deployed monthly basis through Bank Transfer / electronic mode on or before 7th day of every month. Wages shall include bonus @ 8.33% of daily wage [as admissible as per rule] of the particular worker (helpers) multiplied by number of days' work actually performed by the worker in a particular month, which shall also be shown separately on the wage sheet of the worker. If 7th day happens to be holiday then wages are to be paid on the preceding working day.
16. A consolidated wage sheet containing the names of all workers so deployed by the contractor duly signed / acknowledged by the workers after disbursement of wages to be submitted to the Engineer-in-charge every month. Proof of disbursement of wages to be submitted before claiming bill. The wage sheet shall contain mandatory fields as per following: [1] Sr. No., [2] Name of the worker, [3] Actual days of duty performed, [4] Total wages, [5] Bonus amount, [6] EPF contribution [as applicable], [7] ESI Contribution [as applicable], [8] Total deductions, [9] Net wages received / disbursed, [10] signature of the worker.
17. In case of delay of payment of wages beyond 7 days as specified, IIT Delhi shall arrange for payment to the workers at the risk & cost of the contractor. The decision of the Engineer-in-charge in this regard shall be full & final and binding upon the contractor.
18. It would be the responsibility of contractor to arrange all permission/ approvals from all local bodies/statutory bodies & nothing extra shall be paid on account of this by the Institute.
19. **EPF & ESI contribution in respect of the workers shall be deposited with the authority concerned as per applicable rules in time and employer's share shall be got reimbursed to the contractor (as applicable based on minimum threshold limit as prescribed by EPFO) by IIT Delhi on production of proof of deposition. But before claiming bill, EPF & ESI contributions shall have to be updated and to be submitted for the preceding month else bill cannot be processed.**
20. The work shall be carried out in four shifts i.e. General Shift, Morning Shift, Evening Shift and Night Shift as per direction of the Engineer-in-charge.
21. In case of any emergency/breakdown or in case of absentee of staff, the worker(s) on duty shall have to continue his duty beyond his normal duty to maintain the essential services till the reliever comes and also inform the Engineer-in-charge immediately. Contractor shall have to arrange substitute / reliever in order to relieve the existing worker.

22. After award of work the contractor shall be required to submit “**Labour Licence**” duly got issued from Labour Commissioner Department within one month and returns to be submitted time to time as per Rules.
23. The contractor shall provide **Proper Log Books (non-returnable)** for every activities (AC, Sub Station, DG set, Fire, Complaint register, etc.), adequate duster (*dhoti*), detergents, etc. on the day of starting the contract with writing pens during the whole contract for logging operating data.
24. Five sets of tool kit shall be provided (non-returnable) which shall be kept centrally comprising following tools: Tester, Adjustable Screw Driver set, Plier, Multimeter, Adjustable spanner. One TDS meter shall be provided.
25. **The contract of the work may, at any time, be terminated by the Engineer-in-charge serving at least 15 days’ notice to the contractor without assigning any reasons. Bill will be finalised upto the actual period of work done subject to fulfilling other conditions as stated in the NIT.**
26. **Two Heavy Duty Pressure Pump shall always be kept at site during the whole contract period in healthy condition for periodical cleaning of condenser, evaporator coils and filters of Air-conditioning system.**
27. One Technical Representative (Manager) as per clause 32 shall be provided at site for general supervision day to day basis who shall be the point of contact at site.
28. At least 50% (Fifty Percent) of all materials shall be delivered at site as per the BOQ for readiness within one month after the starting of work. Payment shall be released proportionately with the RA bills.
29. **PENALTY:**
- 29.1. Instrument / Tools:** @Rs.800 per month shall be recovered from the bill of the contractor for until compliance as per contract clause 24. Contractor shall provide proof of delivery of Instruments / Tools at site to the Engineer-in-charge.
- 29.2. Pressure Pump:** @Rs.500 per month per pump shall be recovered from the bill of the contractor for until compliance as per contract clause 26. Contractor shall provide proof of delivery of Instruments / Tools at site to the Engineer-in-charge.
- 29.3. Log Book & Stationeries:** @Rs.500 per month shall be recovered from the bill of the contractor for until compliance as per contract clause 23. Contractor shall provide proof of delivery of Instruments / Tools at site to the Engineer-in-charge.
- 29.4. Absence of worker:** Recoveries of the absenteeism will be done on Basic Rate (+) Bonus + Contractor Profit (+) GST 18% (+) Labour Cess @ 1% + Below & Above % as per tender.
- 29.5. Technical Representative: Recovery as per clause mentioned.**

HIGHLIGHTS OF MAJOR ACTIVITIES

Sr. No.	Particulars	Scope of Work
1	Air Conditioning System	a) Round the clock operation and monitoring of chiller plants morning, evening & night shift x 7 days. b) Daily checking of cooling tower and periodical cleaning. c) Logging of all parameter hourly basis in log book. d) Attending complaints of user department. e) Inspect and lubricate all water pumps. f) Checking and report expansion tank, drain, clean and flush out tanks as necessary. g) Checking all air handling and fan coil units

		and periodical cleaning. h) Cleaning and servicing of all washable filters
2	Lifts	Round the clock operation of lifts, reporting of faults, rescue operation in case of trapped passengers, etc.

GENERAL MAINTENANCE OF FIRE ACTIVITIES

A. Maintenance and Operation of Wet Riser System

1.0 INTRODUCTION

- a. This annexure cover suggestive guidelines for maintenance and operation of the Wet Riser System.

2.0 OBJECTIVE

- a. To keep the entire system fully operational and functional at all times.
- b. In case full system cannot be kept functional for unavoidable reason, as much as possible, the installation shall be retained functional by isolating the defective section.

3.0 MAINTENANCE REQUIREMENT OF SYSTEM COMPONENTS

- a. For maintaining firefighting system following points are to be taken care of:-
 - i. To ensure availability of water in UG tank and terrace tank all the time and to maintain the tanks in clean condition.
 - ii. To ensure that the piping system is free from leakage. Any portion found to be leaking is to be isolated, rectified and connected with healthy system in shortest possible time.
 - iii. To ensure that all pumps are in good running condition. Any pump found to be defective is to be isolated by closing valves and attended immediately and put in to service in minimum time. All pump glands shall be maintained in efficient working condition and the packing renewed as required to maintain the efficiency. All working parts shall be kept clean and lightly oiled. Any necessary repairs shall be put in hand and carried out immediately.
 - iv. To ensure availability of power for electrical pumps, working of starters, switch gear and other electrical components.
 - v. To ensure healthiness of diesel engine starting system, battery voltage, battery charger and availability of adequate diesel for engine operation.
 - vi. To check all landing valves of internal and external hydrants, isolating valves and replace the defective ones whenever necessary.
 - vii. To check automatic operation of entire system by opening landing valves at different locations.
 - viii. To conduct fire drill at regular interval.

4.0 PERIODICAL TESTING

- a. For achieving the objectives of Para 2.0 and meeting the requirement of Para 3.0 periodical testing and checking the system is essential. Various activities and their duration have been tabulated in the following Table.

5.0 PROCEDURE

- a. Though the firefighting system operation is automatic, however for daily checking and attending to the system in case of operation, a trained pump operator shall be available round the clock.
- b. Operation and Maintenance instructions shall be available in the pump room and fire control room.
- c. Water for firefighting purpose is not to be used for any other purpose. However, in order to avoid stagnation, the same shall be changed / cleaned regularly.
- d. Maintaining Diesel Engine is very important for the system operation since during fire, power supply is deliberately or un-deliberately switched off. Proper running of DG set shall be ensured and any problem shall immediately be brought to the notice of the E-in-C. Adequate diesel should either be available in the pump house or nearby so that operation is not discontinued for want of diesel.
- e. Hydrant Mains / Ring Mains shall be tested **once a fortnight** with a pump delivering at its maximum pressure. A running test with two or more hose lines each 30 m long operating shall be carried out.
- f. If any out let is found to be defective and replacement is not easily available the whole assembly should be removed and be replaced by blank off plate so that the system remains operational.
- g. Hose reels shall be subjected to regular inspection to ensure that all valve are functional, out let nozzle not choked. At least once in a year the same shall be subjected to operation to ensure that hose reel is in good condition and that the coupling joints are water tight. Flow should also be checked for the leakage of hose reel.
- h. All hydrants shall be examined systematically once a week to ensure that valves and spring catches are maintained in good condition. Spare washers shall be kept for hydrant valve seats.
- i. Cut-off valves shall be thoroughly overhauled annually to remove sludge and other foreign matter collected in the valve seating.
- j. All isolating valves shall be checked for operation. The valves in closed position be opened and closed couple of times and the valves in open position be closed and opened couple of times so that when required, the valves perform their function.
- k. All hose boxes/hose stations shall be inspected externally once every week to ensure that the equipment installed therein is intact. Further, the hose boxes/hose stations shall be cleaned internally and externally once a month.
- l. When the hose gets worn out at the tail end of the coupling(s), it is permissible to cut the end(s) of the hose. However should the lengths of the hose after cutting(s) fall below 90 percent of its original, the hose shall be reported for discarding.
- m. Fire protection hose shall not be used for purposes other than fire protection and drill.

- n. Hose pipes and their couplings shall be checked to ensure there is no leakage during their use. The female coupling cam tooth mechanism be operated and lubricated for ensuring ease of operation.
- o. Power supply to the pump house is not to be discontinued for any reason. Alternative arrangement shall be made in case any feeding switch gear is under repair / replacement.
- p. It has to be ensured that there are no obstructions in front of the hydrants impeding accessibility

6.0 FIRE DRILL

- a. For making the users familiar with the system, Fire Drills shall be carried out once in six months. A written record of such drill shall be kept on the premises for a three years period and shall be readily available for fire brigade inspection. Operation of the system shall be demonstrated so that all users are confident of the system and aware of their duties and responsibilities during fire.

MAINTENANCE OF AUTOMATIC SPRINKLER SYSTEM

1.0 Maintenance of other freighting installation has been described above which hold good for sprinkler installations also. In addition, following points shall be taken care.

- a. Sprinkler shall not be re-conditioned or repaired. Used and/or defective sprinklers shall be proposed for replacement by new ones.
- b. As far as possible, the installation shall be maintained in operating condition by blanking off pipe work feeding the inoperative part or parts where work is taking place.
- c. The inoperative part, if defective shall be attended to and connected with the operative system.
- d. Action following sprinkler operation
 - i. Following the operation of sprinklers, the operated head shall be replaced with new ones and water supply shall be restored.
 - ii. The sprinklers in the vicinity of the operated sprinklers shall also be checked for damage by heat or any other cause and replaced if necessary.
 - iii. The sprinkler pump shall not be shut off until complete extinguishment of the fire. The starting of the pump shall be automatic but the stopping of the pump after an extinguishment shall be manual.
- e. All piping shall be examined to determine its conditions at least once a year.
- f. All Installation Control Valves and associated equipment shall be serviced and tested annually.
- g. Discharge test of sprinklers shall be carried out at least once in six months.
- h. Manual testing of the system shall be carried out once in six months.
- i. When normally opened valves are closed following system operation or test, suitable procedure shall be instituted to ensure that they are re-opened.
- j. The entire system shall flushed at least once in a year.
- k. The sprinkler bulbs shall be kept free from paint or dust.

MAINTENANCE OF FIRE ALARM SYSTEM

1. Servicing / Periodical Maintenance

- 1.1. **Daily Attention:** A check should be made every day to ascertain that the panel indicates normal operations. If not, that any fault indicated is recorded in the log book and is receiving urgent attention.
- 1.2. **Weekly attention:** The following tests should be made every week to ensure that the system is capable of operating under alarm conditions.
 - 1.2.1. Once a week, at least one trigger device or end of line switch on one zone circuit should be operated to test the ability of the control and indicating equipment to receive a signal and to sound the alarm and operate other warning devices. If there is more than one zone on a system having unmonitored wiring, each unmonitored zone should be tested each week, but without sounding the alarm more than once.
 - 1.2.2. For systems having monitored wiring and up to 13 zones/loop, each zone/loop should be tested in turn but if there are more than 13 zones/loop, more than one zone/loop may need to be tested in any week so that the interval between tests on one zone /loop does not exceed 13 weeks. It is preferable that each time a particular zone is tested, a different trigger device is used. An entry should be made in the log book quoting the particular trigger device that has been used to initiate the test. If the operation of the alarm sounder and/or the transmission of the alarm signal has been prevented by disconnection, then a further test should be carried out to prove the final reinstatement to the sounders, and if permissible, the alarm transmission circuits: and
 - 1.2.3. A visual examination of the battery and connections should be made to ensure that they are in good condition. Action should be taken to remedy any defect.
 - 1.2.4. Any defect noticed should be recorded in the log book and reported to the responsible person, and action should be taken to correct it.
- 1.3. **Quarterly inspection and test:** The following check- list and test sequence should be carried out:
 - 1.3.1. Entries in the log book since the previous inspection should be checked and any necessary action taken.
 - 1.3.2. Batteries and their connections should be examined and tested to ensure that they are in good serviceable condition.
 - 1.3.3. Check the Batteries for their proper functioning.
 - 1.3.4. The alarm function of control and indicating equipment should be checked by the operation of a trigger device in each zone as described. The operation of alarm sounders and any link to a remote manned center should be tested. All ancillary functions of the control panel should also be tested where practicable. All fault indicator and their circuits should be checked preferable by situation of fault conditions.
 - 1.3.5. Any defect should be recorded in the log book and reported to the responsible person, and action should be taken to correct it.
- 1.4. **Annual Inspection Tests:** The following checks and test sequence should be carried out.
 - 1.4.1. Operation of at least 5 percent of the detector in an installation should be checked once in 6 months.
 - 1.4.2. Each detector should be checked for correct operation using specified test equipment and method.

1.4.3. Visual inspection should be made to confirm that all cable fittings and equipment are secure, undamaged and adequately protected.

1.4.4. On completion of the annual inspection, the entry should be made in register in respect of defects found. After the defects are rectified the entries should then again be made.

1.5. **Clearing and Maintenance:**

1.5.1. Detectors require periodic cleaning to remove dust or dirt that has accumulated, the frequency of cleaning depending on the type of detector and the local ambient conditions. In any case, the interval should not exceed a period of 6 months. For each detector, the cleaning, checking, operating and sensitivity adjustment should be attempted only consulting manufactures instructions. These instructions should have details method such as creating vacuum to remove loose dust and insects, and cleaning heavy greasy deposits, etc.

1.6. **Tests following an Alarm or Fire:**

1.6.1. All detectors suspected of exposure to a fire condition should be tested in accordance with the provisions contained in this code pertaining to annual inspection test. In addition, a visual check of the battery charger should be carried out to ensure perfect serviceability. However, a check should be made to the extent of damage, if any, to the cables and other components and also the systems as whole.

1.7. **System Disconnection During Testing:**

1.7.1. Care should be taken to minimize the disruption of the normal use of the building by alarm sounding during detector testing. If detectors are removed for testing or servicing, replacement detectors should be provided.

1.7.2. It shall be the responsibility of the contractor to get the installation inspected and passed by the local authorities concerned; as may be required by the local by laws, payment of necessary inspection fee shall be paid by Department.

MAINTENANCE OF ELECTRICAL SYSTEM & SUBSTATION EQUIPMENT

1. Testing earth Resistance
2. Checking transformer bushing for cracks
3. Checking relay alarm system if any
4. Inspection & Checking of operation & tripping mechanism
5. Inspection & Checking visual medication & meters
6. Inspection & checking of TPN Switch/MCB for operation & Tightness of connection
7. Opening the covers and cleaning the panel and surrounding area
8. Cleaning of contacts and arc chutes.

Inspection, Checking of following Substation Equipment:

1. Transformer: 2 x 1000 KVA (Air Cooled Transformer)
2. HT Panel:

C ... Nil I Nil O Nil

- i. VCB: One Incoming and Two Outgoing 630A Capacity
- ii. 11/110V PT iii. Ammeter iv. Voltmeter v. IDMT relay etc.
- 3. LT Panel:
 - i. ACB: 2 nos. as incoming from transformer
 - ii. ACB 2 nos. as DG incomer
 - iii. 11 nos. of Outgoing through MCCBs and ACB for Chiller Plants, UPS Charging and different rising mains.
- 4. Earthing:
 - i. Copper Earthing: 10 nos. ii. GI Earthing: 18 nos.
- 5. APFC Panel for Power Factor management

SCHEDULE OF O&M OF DG SETS

1. Daily maintenance schedule

- 1.1. Check and correct cooling water level
- 1.2. Check and correct belt tension
- 1.3. Check and correct lub oil level
- 1.4. Check and ensure sufficient quantity of fuel in the tank
- 1.5. Check battery terminal and connections for proper tightness, top up electrolyte if required.
- 1.6. Check and correct leakage, if any.

2. After starting the Engine

- 2.1. Check lub oil pressure
- 2.2. Check and correct leakage, if any
- 2.3. Check all meters, engine noise etc. and correct abnormalities, if any
- 2.4. Check engine protection system

3. Weekly Maintenance Schedule

- 3.1. Checking and cleaning of control panel
- 3.2. Checking protection devices
- 3.3. Checking of tools
- 3.4. Checking of earth-watering earthing pits
- 3.5. Checking of EA room lights and ventilation
- 3.6. Checking of battery charger
- 3.7. Clean radiator fins by blowing air in the opposite direction
- 3.8. Check oil level and clean air cleaner
- 3.9. Check and correct loose clamps

UPS SYSTEM

1. Check that intake and exhaust air openings are not obstructed.
2. Remove dust and foreign particles within the cabinet/chassis using compressed air or blower.
3. Check all controls and indications for proper functioning. Check front panel meter for errors in readings.
4. Check all the input and output connections for any loose connection
5. Check batteries for any loose connection and also for any kind of deposit on its terminals. • Clean the battery terminals

RO SYSTEM / DRINKING WATER FILTRATION PLANT & WATER COOLER

1. Checking of all parameters
2. PH value of water checking
3. TDS of water checking
4. Ensure proper operation of the plant
5. Checking of all pumps and electrical controls

SCHEDULE OF GENERAL EI MAINTENANCE

1. General Guidelines

- a. Safety procedures as per IE Rules should be duly followed.
 - b. The number of items to be maintained in a building may be many like fittings, fans, DBs, earth sets etc. In order to achieve compliance to the prescribed periodicities for the various activities on them as per this schedule, each of these items may be divided into convenient numbers, to carry out the respective activities in sub periods, in a cyclic (sequential) order. For example, if DB's are to be checked every month, and there are 50 DBs in a building, these may be checked at the rate of 2 or 3 DBs every day in a sequential order (programmed in advance) so that all DBs are checked in a month.
 - c. Maintenance activities carried out as per this schedule should be noted in the Maintenance Register. When tests are carried out, the test results should be recorded with appropriate identification references (For Example: SDB7; Earth pit No.4; R/M Wing A etc.)
 - d. The voltage of supply, total load current and PF should be noted in logbook every day, preferably during peak loading time of the day. (In the case of isolated/ unattended buildings where it is not feasible to log daily, the period may be increased to weekly or fortnightly as feasible).
2. Inspection of electrical installations is intended primarily from fire safety considerations. Following points need to be observed as part of inspection, and corrective action as necessary should be taken immediately, including coordination with the client departments concerned, as may be required.
 - a. Check that there is no sign of heating up, burning smell, discoloration or sparking at any of the boards (SDBs as well as main boards), and Rising Mains. These may occur due to overloading or loose terminations. Highly unbalanced loading may cause heavy neutral currents and consequent heating of neutral conductors and terminals.
 - b. No temporary wiring exists anywhere in the building.
 - c. There is no joint in cords connecting the WTAC units/ voltage regulators/office equipment like photocopier, PC etc.

- d. No bare wiring exists over the flooring without mechanical protection by a metallic conduit / channel.
 - e. There is no misuse of socket outlets, such as connecting power load to light socket, connection of multiple loads to one socket, use of heaters in record room, library etc. In such cases of additional demands of outlets, these should be brought to the notice of the Engineer-in-charge early, after taking approval of the competent authority.
 - f. All DBs should be only of MCB type and all sockets for WTAC units should be of industrial type controlled by MCB.
 - g. The shafts/ spaces for electrical services are not misused, for storage or for dumping rubbish.
 - h. The spaces in front of DB's and sockets are free (without any storage of files/papers etc.)
 - i. No additions/ alterations are done by the user departments to the electrical installations by themselves.
3. A record of loading upto DB level (in each phase in case of 3 phase DBs) should be maintained, after measurements using a clip on ammeter. Such measurement should be done, as far as possible during peak season (summer and winter), when the loads are likely to be the highest.
- a. The PF should be maintained above 0.8 (or any higher value fixed by the licensee without penalty). Examine the adequacy of capacitors (if any) accordingly. This shall be brought to the notice of the E-in-C for corrective actions.
 - b. Note down from the electricity bills, details of maximum demand, energy & PF to examine the trend of loading, penal charges if any being paid etc. (Even if the bills are paid directly by client Depts.) review of contract demand, strengthening of system, PF correction requirements etc. may be done with this review in consultation with E-in-C.
4. While cleaning fittings and fans, the fixing/ suspending arrangements should also be checked and attended to as necessary. Care should be taken that the alignment is not disturbed.
- a. In the case of ceiling fans, remove the blades, and wash the same with detergent, without causing any deformation of blade angle. Check the shackle and replace if damaged. Check that down rod is fully screwed up to the last thread on both ends and that threads are not loose. If so required, replace with new down rod of the same size, thickness and length of threading (not less than 20 mm). Check split pins and replace if any strain deformation or damage is observed. If any other system of suspension had been adopted, check the soundness of tighten as necessary. Fix fan blades tightly to the body. Operate the fan at different speeds; the run should be without wobbling/ noise.

- b. As per specifications, lubrication needs to be done as necessary. In such cases, the fan needs to be brought down, after removing the blades. The old grease should be replaced with a fresh one, after cleaning the bearing. If damaged, the bearing should be replaced. When reinstalling the fan, the suspension bolts should be well tightened.
- c. Insulation test should be done during monsoon season, as per clause 16.2 of CPWD General Specifications for Electrical Works Part I Internal, 2013.
- d. Earth continuity test and earth electrode resistance test should be conducted during summer season, as per clauses 16.4 and 16.5 of CPWD General Specifications for Electrical Works Part I Internal, 2013.

PREVENTIVE MAINTENANCE

1. Cleanliness is the essence of preventive maintenance. Keep areas clean.
2. Have schematic diagram for each installation handy.
3. No loose wiring.
4. No overloading.
5. Preventive maintenance of switchboards, DBs every six months
6. For multi-storied building go for fuse less switchgear like ACBs, MCCBs, and MCBs, as a precaution against fire on account of short circuit.
7. Proper manning/ supervision of installation.
8. Maintenance of logs records and history sheet of events and breakdowns. Ensure working of all measuring and indicating instruments.
9. Annual inspection to ensure system adequacy, safety, efficiency and take remedial measures.
10. Display important telephone numbers.
11. No short circuit to problem like patchy repairs.
12. **Compound Lighting**
 - a. 3 monthly cleaning of fittings. Weekly check of working of all fittings. This ensures a bright and safe premises during night.
13. For proper maintenance of electrical installations, the following items of work shall be carried out regularly as per periodicity stated below and a proper record of such work shall be maintained.

a. Earth testing	-	Once in a year
b. Insulation test	-	Once in a year
c. Cleaning of E.I.		
i. Residential Buildings	-	Once in a year
ii. Non-residential Buildings	-	Once in a year
d. Oiling and greasing of fans	-	As and when required
e. Checking of regulators, replacement	-	Once in a year.

ANNEXURE - 1**<< Organization Letter Head >>
DECLARATION**

I / We, _____ hereby declare that all the information and data furnished by our organization with regard to this tender specification are true and complete to the best of our knowledge. I / we have gone through the specification, conditions and stipulations in details and agree to comply with the requirements and intent of specification.

1	Name & Address of the bidder	:	
2	Phone	:	
3	E-mail	:	
4	Contact person name	:	
5	Mobile number	:	
6	GSTIN number	:	
7	PAN number	:	
8	UTR no. [if deposited online] for EMD	:	
9	DD / FDR No. & date [if uploaded scanned copy] for EMD	:	
	BANK DETAILS of the Bidder		
10	Bank name	:	
11	Branch address	:	
12	Branch telephone no.	:	
13	MICR Code of the bank	:	
14	IFSC code	:	
15	Bank Account no.	:	
16	Type of account	:	
17	PI attach one cancelled cheque	:	

We further declare that our organization has not been blacklisted / delisted or put to any holiday by any Institutional agency / Govt. Department / Public Sector Undertaking in the last three years.

(Signature & name of the bidder)
Seal of the bidder

C ... Nil I Nil O Nil

BID SUBMISSION CHECK LIST

ONLINE BID SUBMISSION:

The bid (complete in all respect) must be uploaded online in **two** Envelops as explained below:-

Envelope – 1 (Following documents to be provided as single PDF file)			
Sl. No.	Documents	Content	File Types
1	Technical Bid	Annexure - 1	.PDF
2		EMD Submission proof	.PDF
3		Enlistment Order	.PDF
4		Certificate of work experience as desired	.PDF
5		Certificate of GST Registration	.PDF
6		Affidavit as per provision on stamp paper	.PDF
7		Acceptance to execute INTEGRITY PACT	.PDF
8		IITD 7 / 8 duly signed	.PDF
9		EPFO & ESIC Registration proof with updated challan	.PDF
10		Valid Electrical Licence / Undertaking	.PDF
11		Any other document as specified in the NIT	.PDF
Envelope – 2			
Sl. No.	TYPES	Content	
1.	Financial Bid	Price bid should be submitted in BOQ format.	.EXL

SCHEDULE OF QUANTITY

Name of work: Round the clock Operation & Maintenance of E & M Services of Sonipat Campus of IIT Delhi

Item No.	Description of items	Qty.	Rate (INR) including all taxes and duties	Unit	Amount
	MANPOWER PART				
1	<p>Operating (round the clock as required) manning and maintaining of various Central AC Plants, DG Sets, Lift, Fire Detection and Fire Fighting system, UPS, RO , E.I work, Substation including attending complaints / faults in respective buildings maintaining complaint register, log book by deputing the following graded manpower who shall be on duty in the building during the whole contract period to be deployed inside the Institute campus. Minimum 24 Skilled, 7 unskilled on board on daily basis and 1 highly skilled shall be as per duty chart obeying Minimum Wages Act.</p> <p>(Deployment of manpower at site shall be done in consultation with the Engineer-in-charge as per duty chart as per terms and conditions)</p>				
	<p>Deputing of following reserve manpower for manning, operation, attending, managing all E & M activities who shall be on duty in the building during the whole contract period.</p> <p>(a) Highly Skilled Supervisor (Diploma in Electrical or ITI with 10 Years Experience) - 01 no.</p> <p>(b) Fireman - 04 nos.</p> <p>(c) Skilled Electrician - 07 nos.</p> <p>(d) DG Operator - 04 nos.</p> <p>(e) Pump Operator - 02 nos.</p> <p>(f) HVAC Operator - 07 nos.</p> <p>(g) Helper - 07 nos.</p>				
1.01	Mechanic / Skilled Grade	7488		man-days	
1.02	Unskilled / Helper Grade	2184		man-days	
1.03	Highly Skilled Grade	312		man-days	

	MATERIAL PART				
2	Supplying and drawing following sizes of FRLS PVC insulated copper conductor, single core cable in the existing surface/ recessed steel/ PVC conduit/ trunking as required. (Acceptable make: Havells / Polycab / KEI / Universal / Finolex)				
2.1	2 x 1.5 sq. mm	200		Meter	
2.2	3 x 1.5 sq. mm	200		Meter	
2.3	3 x 2.5 sq. mm	250		Meter	
2.4	6 x 2.5 sq. mm	200		Meter	
2.5	3 x 4 sq. mm	200		Meter	
2.6	6 x 4 sq. mm	250		Meter	
2.7	2x 6 sq. mm	250		Meter	
2.8	3x 6 sq. mm	200		Meter	
3	Supplying and fixing of following sizes of steel conduit along with accessories in surface/recess including painting in case of surface conduit, or cutting the wall and making good the same in case of recessed conduit as required. (ISI marked) (Acceptable make: BEC / AKG /Steel krafts / NIC)				
3.1	20 mm	50		metre	
3.2	25 mm	50		metre	
3.3	32 mm	50		metre	
4	Supplying and fixing of following sizes of medium class ISI marked PVC conduit along with accessories in surface/recess including cutting the wall and making good the same in case of recessed conduit as required for running telephone wire. (Acceptable make: Astral / Georg Fischer / Prakash / Prince / Supreme with proper gauge) N.B. Normal ordinary PVC pipe shall not be accepted for external use. (Acceptable make: Prakash / Prince / Supreme)				

4.1	25 mm	150		metre	
4.2	32 mm	150		metre	
5	Supplying and fixing following modular switch/ socket on the existing modular plate & switch box including connections but excluding modular plate etc. as required. [Acceptable make: Legrand / Havells-Crabtree / L&T / ABB / Wipro North West /Anchor-Roma / Schneider (Zencelo)]				
5.1	5/6 A switch	150		Each	
5.2	15/16 A switch	150		Each	
5.3	3 pin 5/6 A socket outlet	200		Each	
5.4	6 pin 15/16 A socket outlet	150		Each	
6	Supplying and fixing two module stepped type electronic fan regulator on the existing modular plate switch box including connections but excluding modular plate etc. as required.(Acceptable make : Legrand / Havells-Crabtree / L&T / ABB / Wipro North West /Anchor-Roma/ Schneider)	50		Each	
7	Supplying and fixing following size/ modules, GI box alongwith modular base & cover plate for modular switches in recess etc. as required.				
7.1	3 Module (100mmX75mm)	150		Each	
7.2	4 Module (125mmX75mm)	150		Each	
7.3	8 Module (125mmX125mm)	150		Each	
8	Supplying and fixing call bell/ buzzer suitable for single phase, 230 V, complete as required.	20		Each	
9	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) [Acceptable make: Havells / Siemens / Schneider / C&S / L&T / Legrand / ABB / HPL / Hager]				
9.1	12 way, Double door	5		Each	
9.2	16 way, Double door	5		Each	

10	Supplying and fixing of following ways surface/ recess mounting, vertical type, 415 V, TPN MCB distribution board of sheet steel, dust protected, duly powder painted, inclusive of 200 A, tinned copper bus bar, common neutral link, earth bar, din bar for mounting MCBs (but without MCBs and incomer) as required. (Note : Vertical type MCB TPDB is normally used where 3 phase outlets are required.) (MCCB as a incomer) [Acceptable make: Havells / Siemens / GE Power / Crompton / L&T / Legrand/ C&S]				
10.1	4 way (4 + 12), Double door	2		Each	
10.2	8 way (4 + 24), Double door	2		Each	
10.3	12 way (4 + 36), Double door	2		Each	
11	Supplying and fixing 5 A to 32 A rating, 240/415 V, 10 kA, "C" curve, miniature circuit breaker suitable for inductive load of following poles in the existing MCB DB complete with connections, testing and commissioning etc. as required. [Acceptable make: Havells / Siemens / Schneider / C&S / L&T / Legrand / ABB / HPL / Hager]				
11.1	Single pole	150		Each	
11.2	Double pole	50		Each	
11.3	Triple pole	25		Each	
11.4	Triple pole and Neutral	25		Each	
12	Supplying and fixing 20 A, 240 V, SPN Industrial type socket outlet, with 2 pole and earth, metal enclosed plug top alongwith 20 A, "C" curve, SP, MCB, in sheet steel enclosure, on surface or in recess, with chained metal cover for the socket out let and complete with connections, testing and commissioning etc. as required. (Acceptable make - Havells / Siemens / GE Power / Crompton / L&T / Legrand/ C&S]	20		Each	
13	Supplying and fixing 30 A, 415 V, TPN Industrial type socket outlet, with 4 pole and earth, metal enclosed plug top alongwith 30 A "C" curve, TPMCB, in sheet steel enclosure, on surface or in recess, with chained metal cover for the socket out let and complete with connections, testing and commissioning etc. as required. (Acceptable make - Havells / Siemens / GE Power / Crompton / L&T / Legrand/ C&S]	50		Each	

14	Supplying and laying DLP PVC trunking system and accessories with Body + Flexible cover + Internal angle + End cap for accommodating wire and power chord for aesthetics in specific areas complete as directed. (Acceptable make: Legrand)				
14.1	Body without cover 150 X 50 mm	200		mtr	
14.2	Flexible cover width 40 mm	200		mtr	
14.3	Flexible cover width 85 mm	200		mtr	
14.4	Internal angle for the above size trunking	200		Each	
14.5	Clip on partition - Plastic	200		Each	
14.6	End Cap	200		Each	
15	Supplying and laying arteor socket outlets clip on support 3 modules for 85 mm cover complete as required.(Acceptable make: Legrand)	200		Each	
16	Supplying and fixing following Arteor switch/ socket on the existing DLP trunking body etc. as required. [Acceptable make: Legrand / Havells-Crabtree / L&T / ABB / Wipro North West /Anchor-Roma / Schneider (Zencelo)]				
16.1	6 A arteor switch	150		Each	
16.2	20 A arteor switch	150		Each	
16.3	3 pin 6 A arteor socket outlet	150		Each	
16.4	3 pin 16 A arteor socket outlet	150		Each	
17	Providing and fixing of MCCB of following rating and breaking capacity with thermomagnetic release and terminal spreaders with SS Enclosure box(L & T make) suitable for 415 volt,3 phase,4 wire,50 Hz A.C supply system including drilling holes in SS enclosure box, making cable connections, etc. as required.[Acceptable make: Havells / Siemens / GE Power / Crompton / L&T / Legrand/ C&S]				
17.1	25A 25kA, FP MCCB	3		Each	
17.2	63A 25kA, FP MCCB	3		Each	
17.3	125A,25kA, FP MCCB	2		Each	

18	Supplying and Laying and fixing of one number PVC insulated and PVC sheathed / XLPE Aluminium armoured power cable of 1.1 KV grade of following size on surface as required. (Acceptable make: Havells / Polycab / Finolex / Gloster / RR Kabel / Universal / KEI / Rallison)				
18.1	4 C x 16 Sq.mm	150		Metre	
18.2	3.5 C x 35 Sq.mm	100		Metre	
18.3	3.5 C x 70 Sq.mm	100		Metre	
18.4	3.5 C x 120 Sq.mm	100		Metre	
19	Supplying and Laying and fixing of one number PVC insulated and PVC sheathed / XLPE Copper armoured power cable of 1.1 KV grade of following size on surface as required. (Acceptable make: Havells / Polycab / Finolex / Gloster / RR Kabel / Universal / KEI / Rallison)				
19.1	4 C x 2.5 sqmm (flexible)	150		Metre	
19.2	4 C x 4 sqmm (flexible)	150		Metre	
19.3	3.5 Core x 16 sqmm (Armoured)	100		Metre	
19.4	3.5 Core x 50 sqmm (Armoured)	100		Metre	
20	Supplying and making end termination with brass compression gland and aluminium / tinned copper lugs for following size of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1 KV grade as required.				
20.1	3.5 X 16 sq. mm (25mm)	20		Each	
20.2	3.5 X 50 sq. mm (35mm)	20		Each	
20.3	3.5 X 70 sq. mm (38mm)	20		Each	
20.4	3.5 x 120 sq.mm (45mm)	50		Each	
21	Supply, Installation, Testing and Commissioning of pre-wired, 18 - 20 watt LED batten light (1200 mm / 4 ft length approx) with antiglare polycarbonate diffuser, CRI not less than 80, CCT 6500 K, not less than 1800 - 2000 lumen complete with all accessories, electronic driver, clips, etc. directly on ceiling/ wall, including connections with 1.5 sq. mm FRLS PVC insulated, copper conductor, single core cable and earthing etc. as required. (Acceptable make: Wipro / Orient / Syska / Trilux / Philips)	100		Each	

	/Crompton / Osram / Havells / Bajaj / Halonix)				
22	Supply, Installation, Testing and Commissioning of pre-wired, 10-15 watt LED batten light (600 mm / 2 ft length approx) with antiglare polycarbonate diffuser, CRI not less than 80, CCT 6500 K, not less than 1000 - 1500 lumen with complete with all accessories, electronic driver, clips, etc. directly on ceiling/ wall, including connections with 1.5 sq. mm FRLS PVC insulated, copper conductor, single core cable and earthing etc. as required. (Acceptable make: Wipro / Orient / Syska / Trilux / Philips /Crompton / Osram / Havells / Bajaj / Halonix)) on wash basin	100		Each	
23	Supply, Installation, Testing and Commissioning of pre-wired, 18-20 watt LED Circular Light with integrated Driver , CRI not less than 80, CCT 6500 K, not less than 1000 - 1500 lumen with complete with all accessories, electronic driver, clips, etc. directly on ceiling/ wall, including connections with 1.5 sq. mm FRLS PVC insulated, copper conductor, single core cable and earthing etc. as required. (Acceptable make: Wipro / Orient / Syska / Trilux / Philips /Crompton / Osram / Havells / Bajaj / Halonix) on wash basin	100		Each	
24	Supply, Installation, Testing and Commissioning of pre-wired, 36 watt 2 x 2 ft. LED square light with CRI not less than 80, CCT 6500 K, not less than 3000 - 3200 lumen with complete with all accessories, electronic driver, clips, etc. directly on ceiling, including connections with 1.5 sq. mm FRLS PVC insulated, copper conductor, single core cable and earthing etc. as required. (Acceptable make: Wipro / Orient / Syska / Trilux / Philips /Crompton / Osram / Havells / Bajaj / Halonix) on wash basin	50		Each	

25	Supplying and fixing of LED bulb (B-22 or suitable type base with pin for easy replacement) of 9 - 12 watt suitable for 230 V, 50 Hz ac supply with integrated LED driver, CRI not less than 80 and CCT 6500 K with not less than 900 - 1200 lumen with polycarbonate diffuser, etc. complete as required. (Acceptable make: Wipro / Orient / Syska / Trilux / Philips /Crompton / Osram / Havells / Bajaj / Halonix)	100		Each	
26	Supply, Installation, Testing and Commissioning of 1200 mm sweep, BEE 5 star rated, ceiling fan with Brush Less Direct Current (BLDC) Motor, class of insulation: B, 3 nos. blades, 30 cm long down rod, 2 nos. canopies, shackle kit, safety rope, copper winding, Power Factor not less than 0.9, Service Value (CM/M/W) minimum 6.00, Air delivery minimum 210 Cum/Min , 350 RPM (tolerance as per IS : 374-2019), THD less than 10%, remote or electronic regulator unit for speed control and all remaining accessories including safety pin, nut bolts, washers, temperature rise=75 degree C (max.), insulation resistance more than 2 mega ohm, suitable for 230 V, 50 Hz, single phase AC Supply, earthing etc. complete as required. (Acceptable make: Havells / Usha / Bajaj / Crompton / Atomberg)	20		Each	
27	Supplying, Installation of 250 mm sweep exhaust fan non metallic body in the existing opening of following size suitable for running in 230 V, 50 Hz ac supply, including making good the damage, connection, testing, commissioning etc. as required. (Acceptable make: Havells / Usha / Bajaj / Crompton) for wash room	20		Each	
28	Supplying, Installation of 450 mm sweep heavy duty with metallic body exhaust fan of metallic body in the existing opening of following size suitable for running in 230 V, 50 Hz ac supply, including making good the damage, connection, testing, commissioning etc. as required. (Acceptable make: Havells / Usha / Bajaj / Crompton)	10		Each	
29	Extra for fixing the louvers/ shutters complete with frame for a exhaust fan of all sizes.	50		Each	
30	Supply & fixing of 5 KW capacity heater element in the existing tank of solar water heater system installed on rooftop of ITEC building including connection, testing, etc complete as required.	36		Each	

31	Supply & fixing of different sizes of Belts in existing AHUs installed in HVAC system of ITEC and CRF building including connection, testing, etc complete as required.				
31.1	B - 22	10		Each	
31.2	B - 24	10		Each	
31.3	B - 26	10		Each	
31.4	B - 27	10		Each	
31.5	B - 29	10		Each	
31.6	B - 43	10		Each	
31.7	B - 47	10		Each	
31.8	B - 48	10		Each	
31.9	B - 53	10		Each	
31.10	B - 54	10		Each	
31.11	B - 61	10		Each	
31.12	B - 72	10		Each	
31.13	B - 92	10		Each	
	Total			***	***

Sr. Asstt.

AEE-in-charge AC Division

Superintending Engineer (Electrical)

C ... Nil I Nil O Nil

Sr. Asstt.

AEE-in-charge

SE