ALL INDIA INSTITUTE OF MEDICAL SCIENCES, DEOGHAR
अखिल भारतीय आयुर्विज्ञान संस्थान, देवघर
INSTITUTE OF NATIONAL IMPORTANCE UNDER MINISTRY OF HEALTH AND FAMILY WELFARE
(स्वास्थ्य और परिवार कल्याण मंत्रालय के अंतर्गत राष्ट्रीय महत्व की संस्थान)
Devipur, Deoghar (Jharkhand)-814152

आरोग्यम् परमं सुखम्

Notice inviting Tender for the work of Supply, Installation, Testing and Commissioning of 15 nos. High Mast Lights at AIIMS Deoghar

Ref. No.	**:**	**02/EE/ AIIMS/Deo /2024-25/RT**
Publishing Date	**:**	**29-07-2024 at 03:00 PM**
Bid Submission Start Date	**:**	**29-07-2024 at 03:00 PM**
Pre-Bid Meeting	**:**	**05-08-2024 at 03:00 PM**
Last Date of Bid Submission	**:**	**13-08-2024 on 03:00 PM**
Bid Opening	**:**	**14-08-2024 on 03:00 PM**

Address:
All India Institute of Medical Sciences, Deoghar
Devipur, Deoghar: 814152, Jharkhand
Email: engineering@aiimsdeoghar.edu.in

INDEX

Name of Work: Supply, Installation, Testing and Commissioning of 15 nos. High Mast Lights at AIIMS Deoghar

Certified that this bid document contains pages 1 to 57 **(**One to fifty seven page).

Executive Engineer
AIIMS, Deoghar

Tender document may be downloaded from CPPP site https://eprocure.gov.in
NIT may be downloaded from institute’s website www.aiimsdeoghar.edu.in

AIIMS, Deoghar

NOTICE INVITING TENDER

The Executive Engineer, AIIMS Deoghar on behalf of the Executive Director, AIIMS Deoghar invites item rate e-tenders from the enlisted contractor in the appropriate classes and category in CPWD, MES, Railway ,PSUs, Original equipment manufacturer of LED flood light fittings or their authorized dealers and enlisted contractors from state government departments having an experience of the similar works from any government (state or central or any autonomous body of the central government) for the following work: -

NIT No. **02/EE/ AIIMS/Deo /2024-25/RT**
Name of Work **Supply, Installation, Testing and Commissioning of 15 nos. High Mast Lights at AIIMS Deoghar**

Estimated Cost: **Rs. 2,47,18,603.00** Earnest money: **4,94,372.00**
Period of completion: **120 Days**
Last date & time of submission of bids: **13-08-2024 upto 03:00PM**

The tender forms and other details can be seen and downloaded from the website www.aiimsdeoghar.edu.in or CPPP site http://eprocure.gov.in

INFORMATION AND INSTRUCTIONS FOR CONTRACTORS FOR e-TENDERING FORMING PART OF NIT AND TO BE POSTED ON WEBSITE

The Executive Engineer, AIIMS Deoghar on behalf of the Executive Director, AIIMS Deoghar invites an item rate e-tenders for the enlisted contractor in the appropriate classes and category in CPWD, MES, Railway ,PSUs, Original equipment manufacturer of LED flood light fittings or their authorized dealers and enlisted contractors from state government departments having an experience of the similar works from any government (state or central or any autonomous body of the central government) for the following work:

Name of work & Location	**Estimated cost put to bid**	**Earnest Money**	**Period of Completion**	**Last date & time of submission of bid**	**Time & date of opening of bid**	**Date and time of submission of EMD in hard form to Executive Engineer office**
Supply, Installation, Testing and Commissioning of 15 nos. High Mast Lights at AIIMS Deoghar	Rs.24718603.00	494372.00	120 Days	13-08-2024 on 03:00PM	14-08-2024 on 03:00PM	Agency can Submit EMD in hard copy in a sealed envelope with clearly mentioning the Tender Id No. on or before last date and time of submission of bid. Delay in the post or courier will be treated as disqualified.

1. The intending bidder must read the terms and conditions of CPWD-6 carefully. He should only submit his bid if he considers himself eligible and he is in possession of all the documents required.

2. Information and Instructions for bidders posted on website shall form part of bid document.

3. 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 www.aiimsdeoghar.edu.in or https://eprocure.gov.in

4. Those contractors not registered on https://eprocure.gov.in are requested to get registered in advance.

5. The intending bidder must have valid class-III digital signature to submit the bid.

6. On opening date, the contractor can login and see the bid opening process. After opening of bids he will receive the competitor bid sheets.

7. Contractor can upload documents in the form of PDF format only.

8. The contractor should quote the rate of item including GST as per statutory rules.

9. The successful bidders have to execute a contract on Indian non judicial stamp paper of Rs.100/- (Rupees one hundred only) within Ten (15) days from the date of award of this tender in his favour and also required to furnish the 5 % against performance guarantee of contract value in the form of FD from any Nationalized/ Schedule bank duly pledged in favour of AIIMS, Deoghar & payable at Deoghar only. If the successful bidder fails to furnish the full Performance

guarantee within 10 (Ten) days after the issue of Letter of Acceptance of Work, action will be taken as per bid declaration form, unless time extension has been granted by AIIMS, Deoghar.

10. The bid shall be valid and open for acceptance by the competent authority of AIIMS Deoghar for a period of 180 (One hundred eighty) days from the date of opening of the Financial bid and no request for any variation in quoted rates and / withdrawal of tender on any ground by bidders shall be entertained. If any bidder withdraws his bid before the said period or issue of letter of acceptance, whichever is earlier, or makes any modifications in the terms and conditions of the bid which are not acceptable to the department, Further the bidders shall not be allowed to participate in the re-bidding process of the work & action shall be taken as per undertaking furnished.

11. Contractor shall deposit earnest money in the form of fixed deposit receipt of schedule bank and submit in original upto one day after last date of submission of bid.

12. The EMD in form of FD/DD shall be submitted in favor of AIIMS Deoghar.
13. List of Self attested Documents to be scanned and uploaded in CPP portal at AIIMS Deoghar within the period of bid submission, failing which the bid of the tenderer shall be rejected:

    I. Scanned copy of EMD in form of FDR/DD
    II. Affidavit (on Rs.100 non judicial stamp with notarized) regarding establishment of proprietorship firm / registered partnership deed / letter of incorporation for private ltd / ltd firm with written power of attorney (in case of bidder is owner, not required) of the authorized signatory.
    III. Copy of work completion certificate for similar works as per eligibility criteria. Completion certificate issued by Competent Authority will only be considered. Competent Authority means officer of not below the rank of Executive Engineer/ Equivalent would be acceptable.
    IV. Proof of deposit of tender fee/EMD. For tender fee exemption, NSIC/MSE certificate comprising relevant category of work should be uploaded (if applicable).
    V. Copy of registration certificate with CPWD, Railways, State Government departments of Jharkhand state, MES,PSU or Original Equipment manufacturer or Authorized dealer of OEM certificate as mentioned in NIT.
    VI. Notarized undertaking on Rs. 100 non judicial stamp paper as per NIT.
    VII. The turnover certificate issued by the Charted Accountant having valid UDIN number for the last 3 years. The average turnover in the last 3 years should be 50% percent of the tendered amount.
    VIII. GST,
    IX. PAN,
    X. Notarized copy of the registered partnership deed. If applicable
    XI. Valid and appropriate class electrical contractor license. Bidder/Tenderer should submit the valid Electrical Contractor's license and Supervisory License issued by any State/Central Govt. licensing board for the required voltage level or above with their tender paper. Tenders without valid electrical contractor's license & Supervisory license will summarily be rejected.

    Note :- Original Equipment Manufacturer of High mast system with LED flood light fittings will not be required to Furnish electrical contractors license. OEM shall submit the Notarized affidavit as proof of OEM.

14. Due to Scarcity of funds payments may get delayed. No interest shall be paid to contractor due to delay in payment.

15. Contract/Bidder have to submit EMD in hard copy in a sealed envelope with clearly mentioning the Tender Id No. on or before the last date and time of submission of bid. Delay in the post or courier may be treated as disqualified.

16. Additional Performance Security may be applicable in case of bidder quoted the abnormal below rate which is decided by the competent authority. The abnormal below rate may also be decided by the competent authority and their decision may be final. Bidder/Contractor has also

to submit the market rate analysis to carry out the work. Non-submission of the Additional performance guarantee in a stipulated time shall be treated as disqualified from the contract and bidder/contractor may also be debarred for the three years in further participation in any bid of any department AIIMS.

CPWD - 6

Govt. of India
AIIMS, Deoghar
Notice Inviting e-Tender

The Executive Engineer, AIIMS Deoghar on behalf of the Executive Director, AIIMS Deoghar invites item rate e-tenders from the enlisted contractor in the appropriate classes and category in CPWD, MES, Railway ,PSUs, Original equipment manufacturer of LED flood light fittings or their authorized dealers and enlisted contractors from state government departments having an experience of the similar works from any government (state or central or any autonomous body of the central government) for the work **"Supply, Installation, Testing and Commissioning of 15 nos. High Mast Lights at AIIMS Deoghar"**

1.1 The work is estimated to Cost **Rs 2,47,18,603.00,** this estimate, however, is given merely as a rough guide.

1.2 Intending tenderer 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: -

Criteria of eligibility for submission of bid documents

1.2.1 Criteria of eligibility for the Experience

Experience of having successfully completed similar works during the last seven years ending last day of month previous to the one in which tenders are invited.

(a) Three similar completed works each costing not less than 40% of the estimated cost put to tender, or
(b) Two similar completed works each costing not less than 60% of the estimated cost put to tender,
or
(c) One similar completed work costing not less than 80% of the estimated cost put to tender.

Similar works means Supply, Installation and Commissioning of High mast lights

1.2.2. Certificate of Registration for GST and acknowledgement of up to date filed return.

1.2.3. Certificate of work experience issued by the Government department/PSU. (As specified in Clause 1.2.1 of CPWD-6)

1.2.4. Valid enlistment certificate of Government department mentioned in the NIT.

1.2.5. Scanned copy of EMD in form of FDR/DD and Contract/Bidder have to submit EMD in hard copy in a sealed envelope with clearly mentioning the Tender Id No. on or before the last date and time of submission of bid. Delay in the post or courier may be treated as disqualified.

2. Agreement shall be drawn with the successful bidders on prescribed Form No. CPWD 7, which is available as a Govt. of India Publication and also available on website www.cpwd.gov.in. Bidders shall quote his rates as per various terms and conditions of the said form which will form part of the agreement.

3. The time allowed for carrying out the work will be **120 Days** 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. The site for the work is available. The architectural and structural drawing should be provided by the vendor at his own cost and approved from concerned department.

5 The tender document consisting of plans if any, 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 website www.aiimsdeoghar.edu.in or https://eprocure.gov.in
The bid submitted shall be opened on:- **14 -08-2024 at 03:00PM**

6. The contractor whose bid is accepted will be required to furnish performance guarantee of 5 (Five Percent) of the tendered amount within the period specified in Schedule F. This guarantee shall be in the form of Fixed Deposit Receipts in favor of AIIMS Deoghar. In case the contractor fails to deposit the said performance guarantee within the period as indicated in Schedule 'F' including the extended period.

7. Intending Bidders are advised to inspect and examine the site and its surroundings and satisfy themselves before submitting their tenders as to the nature of the ground and sub-soil (so far as is practicable), the form and nature of the site, the means of access to the site, the accommodation they may require and in general shall themselves obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect their bid. A bidder shall be deemed to have full knowledge of the site whether he inspects it or not and no extra charge consequent on any misunderstanding or otherwise shall be allowed. 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 local conditions and other factors having a bearing on the execution of the work.

8. The competent authority 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 tenderer shall be summarily rejected.

9. Canvassing whether directly or indirectly, in connection with bidders is strictly prohibited and the tenders submitted by the contractors who resort to canvassing will be liable to rejection.

10. The competent authority reserves to himself the right of accepting the whole or any part of the tender and the tenderer shall be bound to perform the same at the rate quoted.

11. The contractor shall not be permitted to tender for works in AIIMS Deoghar in which his near relative is posted as Divisional Accountant or as an officer in any capacity between the grades of Executive Engineer , Assistant Engineer and Junior Engineer (All 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 gazette officer in AIIMS Deoghar. Any breach of this condition by the contractor would render him liable to reject his Bid submitted by him.

12. This notice inviting Bid shall form a part of the contract document. The successful bidders /contractor, on acceptance of his tender by the Accepting Authority shall within 15 days from the stipulated date of start of the work, sign the contract consisting of: -

a) The Notice Inviting Bid, all the documents including additional conditions, specifications and drawings, if any, forming part of the tender as uploaded at the time of invitation of tender.

b) Standard C.P.W.D. Form 7/8 or General condition of contract for C.P.W.D construction work 2023 with up to date correction slips.

13. The valid solvency certificate of minimum 40% of the tendered amount issued by any nationalized bank under the governed by RBI.
14. The turnover certificate issued by the Chartered Accountant having valid UDIN number of the last 3 years. The average turnover in last 3 years should be 50% percent of the tendered amount.
15. Completion certificate issued by Competent Authority will only be considered. Competent Authority means officer of not below the rank of Executive Engineer/ Equivalent would be acceptable.
16. Notarized copy of the registered partnership deed.
17. Valid Registration certificate of enlistment of contractor in the appropriate category in appropriate class as mentioned in above first para.

INTEGRITY PACT

To,

Sub: **Supply, Installation, Testing and Commissioning of 15 nos. High Mast Lights at AIIMS Deoghar (02/EE/ AIIMS/Deo /2024-25/RT)**

Dear Sir,

It is here by declared that AIIMS Deoghar 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 tender / bid documents, failing which the tenderer / 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 AIIMS Deoghar.

Yours faithfully,

Executive Engineer
AIIMS Deoghar

To,

The Executive Engineer,
AIIMS Deoghar,

Sub: Submission of Tender for the work of **Supply, Installation, Testing and Commissioning of 15 nos. High Mast Lights at AIIMS Deoghar**

Dear Sir,

I / We acknowledge that AIIMS Deoghar 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 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 AIIMS Deoghar. 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, AIIMS Deoghar shall have unqualified, absolute and unfettered right to disqualify the tenderer/bidder and reject the tender/bid is accordance with terms and conditions of the tender/bid.

Yours faithfully

(Duly authorized signatory of the Bidder)

To be signed by the bidder and same signatory competent / authorised to sign the relevant contract on behalf of the Executive Director AIIMS Deoghar.

INTEGRITY AGREEMENT

This Integrity Agreement is made at ..... on this..... day of. 2024

BETWEEN

AIIMS Deoghar represented through the Executive Director…….
(Name of Division)
AIIMS Deoghar..... , (Hereinafter referred as the
(Address of Division)
'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 to as the
(Details of duly authorized signatory)
"**Bidder/Contractor**" and which expression shall unless repugnant to the meaning or context hereof include its successors and permitted assigns)

Preamble

WHERE AS the Principal /Owner has floated the Tender (NIT No.
.....) (here in after referred to as "**Tender/Bid**") and intends to award, under laid down organizational procedure, contract for

(Name of work)
Here in after referred to as the "**Contract**".
AND WHERE AS 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 WHERE AS 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:

(a) 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.

(b) 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.

(c) 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 (PC 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 Coercive 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) commit 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:

a) 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.

b) 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.

c) The Bidder(s) / Contractor(s) will not commit any offence under the relevant IPC/PC

Act. Further the Bidder(s) / Contract(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.

d) 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 participates 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.

e) The Bidder(s)/ Contractor(s) will, when presenting his bid, disclose (with each tender as per Performa enclosed) 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 offence 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 infraudulent practice **means a willful 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) **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 of 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 Indian Penal code (IPC)/Prevention of Corruption 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/ holding 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

This Pact begins when both the parties have legally signed it. It expires for the Contractor / Vendor 12 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.

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, Executive Director, AIIMS Deoghar.

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 intentions.

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** there of shall not be subject to arbitration.

Article 8:- Submission

Additional Performance Security may be applicable in case of bidder quoted the abnormal below rate which is decided by the competent authority. The abnormal below rate may also be decided by the competent authority and their decision may be final. Bidder/Contractor has also to submit the market rate analysis to carry out the work. Non-submission of the Additional performance guarantee in a stipulated time shall be treated as disqualified from the contract and bidder/contractor may also be debarred for the three years in further participation in any bid of any department AIIMS.

Article 9- Legal and Prior Rights

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 / Contract 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: -

अनुसूचियां **SCHEDULES**

[FOR MAJOR (CIVIL/ELECTRICAL) COMPONENT]

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

Schedule of quantities (Enclosed) Page No. - 50-56

अनुसूची 'ख' **SCHEDULE 'B'**
ठेकेदार की निर्गत की जाने वाली सामग्रियों की अनुसूची
Schedule of materials to be issued to the contractor.

क्रम. सं. S.No.	मद विवरण Description of item	मात्रा Quantity	जिस दर पर सामग्रियां ठेकेदार को प्रभारित होगी वह दर अंकों एवं शब्दों में Rates in figures & words at which the material will be charged to the contractor	निर्गत स्थान Place of Issue
1	2	3	4	5

अनुसूची 'ग' SCHEDULE 'C'

ठेकेदार को भाड़े पर दिए जाने वाले औजार एवं संयत्र

Tools and plants to be hired to the contractor

क्रम सं. Sl. No.	विवरण Description	भाड़ा प्रभार प्रतिदिन Hire charges per day	निर्गत स्थान Place of Issue
1	2	3	4

NIL

अनुसूची ‘घ’ SCHEDULE ‘D’

कार्य के लिए विशेष अपेक्षाएं/दस्तावेज, यदि कोई हों, की अतिरिक्त अनुसूची

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

अनुसूची (ङ) SCHEDULE ‘E’

	ठेके की सामान्य शर्तो का संदर्भ	General conditions of contract for CPWD works 2023 (maintenance work)
1.	Reference to General Conditions of contract	as amended upto date.

Name of work: - **Supply, Installation, Testing and Commissioning of 15 nos. High Mast Lights at AIIMS Deoghar**

कार्य की अनुमानित लागत Estimated cost of work	**: ₹ 24718603.00**
(i) धरोहर राशि Earnest money	: **Rs.494372.00 in form of FDR/DD from scheduled bank.**
(ii)निष्पादन गारंटी Performance guarantee :	5% of Tendered amount. निविदित मूल्य का 05 प्रतिशत
(iii) प्रतिभूति निक्षेपः Security Deposit:	2.5% of tendered amount

अनुसूची ‘च’ **SCHEDULE ‘F’**

सामान्य नियम एवं दिशानिर्देशः

General Rules & Directions:

	निविदा आमंत्रण करने वाला प्राधिकारी Officer inviting tender -	**Executive Engineer, AIIMS Deoghar**
	कार्य की मदों की मात्रा के लिए अधिकतम प्रतिशत जिससे अधिक निष्पादित मदों के लिए दरों का निर्धारण खण्ड 12.2 और 12.3 के निम्नानुसार अनुसार होगा Maximum percentage for quantity of items of work to be executed beyond which rates are to be determined in accordance with Clauses see below 12.2 & 12.3.	
	Definitions:	
2(v)	भारसाधक इंजीनियर Engineer-in-Charge	**Executive Engineer, AIIMS Deoghar**
2(viii)	स्वीकार कर्ता प्राधिकारी Accepting Authority	**Executive Engineer, AIIMS Deoghar**
2(x)	अतिरिक्त और लाभों को पूरा करने के लिए श्रम एवं सामग्रियों की लागत पर प्रतिशतता Percentage on cost of materials and labour to cover all overheads and profits.	**15% (Fifteen per cent)**
2(xi)	दरों की मानक अनुसूची Standard schedule of Rates for Civil/Electrical : -	**Delhi Schedule of rate 2023(Civil), 2022(Electrical)/Market Rate issued upto date of receipt of tender.**
2(xii)	विभाग Department	**Engineering, AIIMS Deoghar**
9(ii)	मानक के.लो.नि.वि. ठेका फार्म	**CPWD form 7/8 GCC 2023 const. work**

Standard CPWD contract Form **with up to date correction slip**.

खण्ड Clause 1

;पद्ध स्वीकृति पत्र जारी होने की तारीख से निष्पादन गारंटी के प्रस्तुतीकरण के लिए अनुमत समय
Time allowed for submission of performance guarantee from the date of issue of letter of acceptance : 10 days

;पपद्ध (उपर्युक्त प) में दी गई अवधि के पश्चात् अधिकतम अनुमेय एक्सटेंशन
Maximum allowable extension with late fee @ 0.10% per day of performance guarantee amount beyond the period as provided in (i) above : 1 to 07 days

खण्ड Clause 2

खण्ड 2 के तहत प्रतिकार निश्चित करने वाला प्राधिकारी

Authority for fixing compensation under clause 2 **Executive Director, AIIMS Deoghar**

खण्ड Clause 2A

क्या खण्ड 2 क लागू होगा
Whether clause 2A shall be applicable **No**

खण्ड Clause 5

कार्य आरंभ की तारीख की गणना के लिए स्वीकृति पत्र के जारी होने की तारीख से दिनों की संख्या
No. of days from the date of issue of letter of acceptance for reckoning date of start **10 days.**

लक्ष्य नीचे दी गई सारणी के अनुसार

Milestone(s): - **NA**

कार्य निष्पादित करने के लिए अनुमत्य समय
Time allowed for execution of work 120**(One hundred twenty) Days**
Authority to decide
(i) Extension of Time **Executive Engineer, AIIMS Deoghar**

(ii) Rescheduling of mile stones **Executive Engineer, AIIMS Deoghar**.

(iii) Shifting of date of start in case of delay in handing over of site **Executive Engineer, AIIMS Deoghar**

खण्ड Clause 7

अंतरिम भुगतान के लिए पात्र होने के लिए अंतिम ऐसे भुगतान के बाद कुल भुगतान एकत्रित सामग्रियों के अग्रिमों के समायोजन सहित किया जाने वाला कुल कार्य
Gross work to be done together with net payment/adjustment of advances for material collected, if any since the last such payment for being eligible to interim payment **Rs. 50 Lakhs**

.

खण्ड 10 d Clause10A

कार्यस्थल प्रयोगशाला में ठेकेदार द्वारा उपलब्ध कराये जाने परीक्षण उपकरण की सूची

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

खण्ड Clause10B(ii)

क्या खण्ड 10 ख ;पपद्ध लागू होगा

Whether clause 10B (ii) shall be applicable **NA**

खण्डClause10C

Component of labour expressed as Percent of value of work **NA**

खण्ड Clause 10CC - NOT APPLICABLE.

~~खण्ड 10 गग उन संविदाओं पर लागू होगा जिसमे कार्य समापन की अवधि, अगले कालम में दर्शाई गई अवधि से अधिक अनुबंधित है।~~

DELET

~~Clause 10CC to be applicable in cases~~ with sipulated ~~period of~~ compensation ~~exceeding~~ the period shown in next column : ..... **Months**

खण्ड Clause10d **Yes**

खण्ड Clause 11

कार्य निष्पादन के लिए अनुपालन **For Civil : CPWD specification 2023, Volume-I & II Electrical (External Part II)**

Specifications to be followed for execution of work **with correction slips upto date of receipt of tender.**

खण्ड Clause 12

Applicable

12.2 & 12.3

विचलन सीमा जिसके परे खण्ड 12.2 तथा 12.3 भवन निर्माण कार्य के लिए लागू होंगे

Deviation limit beyond which clauses 12.2 & 12.3 shall apply for work (Other than foundation) **100 %**

12.5 (i) Deviation limit beyond which clauses 12.2 & 12.3 shall apply for foundation work (except earth work) **100%**

(ii) Deviation limit for items in earth work subhead of DSR or related items **100%**

खण्ड Clause 16

घटी हुई दरे निर्धारित करने की लिए सक्षम प्राधिकारी **Executive Engineer,AIIMS Deoghar**

Competent Authority for deciding reduced rates .

खण्ड Clause 18

कार्यस्थल पर ठेकेदार द्वारा लगाये जाने वाली अनिवार्य मशीनरी औजार एवं सयंत्रों की सूची :–

List of mandatory machines, tools and plants to be deployed by the contractor at site. **N.A.**

खण्ड **Clause 25**

Constitution of dispute redressed committee (DRC) Applicable

Designation	**Constitution of Dispute Redressal Committee (DRC**
Chairman	Executive Director /Dpty. Director AIIMS Deoghar
Member Secretary	Superintending Engineer, AIIMS Deoghar
Member	FA/ F&CAO AIIMS Deoghar
Presenting Officer	Executive Engineer, AIIMS Deoghar

खण्ड **Clause 32** **NA**

Clause 36(i) Whether clause 36(i) shall be applicable **YES**

S.no	**Requirement of Technical staff**	**Nos**	**Minimum Experience**	Designation of Technical staff	Rate at which recovery shall be made from the contractor in the event of not fulfilling provision of Clause 36(i)
1	Graduate Or Diploma	**1+1 (Civil+ Electrical)**	**5 years**	**Engineer / Supervisor**	Rs. 30000/- per month per person

खण्ड **Clause 38**

I) क) सीमेन्ट और बिटुमन की अनुमानमूल मात्रा निर्धारित करने के लिए अनुसूची/विवरण — केलोनिवि द्वारा मुद्रित दिल्ली दर अनुसूची 2023 के आधार पर

I) (a) Schedule/statement for determining theoretical quantity of cement & bitumen — On the basis of Delhi Schedule of Rates 2023 printed by C.P.W.D. with correctionslips issued up to date of receipt of tender.

II) अनुमानमूलक मात्राओं में अनुमत्य विचलन
Variations permissible on theoretical quantities. **Yes**

II) अनुमानमूलक मात्राओं में अनुमत्य विचलन
Variations permissible on theoretical quantities. **Yes**

d½ सीमेन्ट जिन कार्यो के लिए निविदा में अनुमानित मूल्य रू. 5 लाख से अधिक न हो

a) Cement for works with estimated cost put to tender not more than Rs. 5 lakhs — **Not Applicable**

जिन कार्यो के लिए निविदामें अनुमानित मूल्य रू. 5 लाख से अधिक हो — ~~2 प्रतिशत जमा/घटा~~

for works with estimated cost put to tender more than Rs. 5 lakhs — ~~2 % plus/minus~~.

ख।) बिटुमन सभी कार्यो के लिए — ~~2.5 प्रतिशत केवल जमा और घटा के पक्ष में शून्य~~

b) Bitumen for all works — ~~2.5% plus only & Nil on minus side.~~

ग)	इस्पात प्रत्येक व्यास, कोट और श्रेणी के लिए पूनर्वलन और संरचनात्मक इस्पात काट	2 प्रतिशत जमा/घटा
c)	Steel Reinforcement and structural steel sections for each diameter, section and category.	2% plus/minus
घ)	सभी अन्य सामग्रियां	शून्य
d)	All other materials	Nil.

अनुमत्य विचलन से अधिक की मात्राओं के लिए वसूली दर

RECOVERY RATES FOR QUANTITIES BEYOND PERMISSIBLE VARIATION

क्रम सं. Sl No.	मद विवरण Description of item	अंको और शब्दों में वह दर जिस पर ठेकेदार से वसूली की जाएगी Rates in figures and words at which recovery shall be made from the Contractor	
		अनुमत्य विचलन से अधिक आधिक्य Excess beyond permissible variation	अमुमत्य विचलन से अधिक उपयोग घटाया Less use beyond the permissible variation
1.	सीमेन्ट Cement	N.A.	**Rs. 6210/- Per MT**
2.	ईस्पात Steel Reinforcement	N.A.	**Rs. 53099/- Per M.T.**

निविदा **T E N D E R**

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 within the time specified in Schedule 'F', viz., schedule of quantities and in accordance in all respects with the specifications, designs, drawings 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 respects in accordance with, such conditions so far as applicable.

We agree to keep the tender open for one hundred eighty (180) days from the due date of opening of financial bid and not to make any modification in its terms and conditions.

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 AIIMS Deoghar, then I/We shall be debarred for tendering in AIIMS Deoghar 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.

मैं/हम एतत्द्वारा घोषणा करते है कि मै/हम निविदा कागजातों, नक्शों और कार्य से संबंधित अन्य अभिलेखों को गुप्त/गोपनीय कागजात के रूप में रखेगे और उनसे प्राप्त/ली गई जानकारी किसी अन्य को, जिन्हें मैं/हम सूचित करने के लिए प्राधिकृत हो, से भिन्न किसी को,नहीं बताएगें या जानकारी को किसी ऐसे रूप में प्रयोग नही करेंगे जो राज्य की सुरक्षा के लिए प्रतिकूल हो।

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 therefrom to any person other than a person to whom I/We am/are authorised to communicate the same or use the information in any manner prejudicial to the safety of the State.

तारीख Dated #.....

ठेकेदार के हस्ताक्षर Signature of Contractor#
डाक का पता Postal Address#

साक्षी Witness : #
पता Address: #
उपजीविका Occupation: #

 # To be filled in by the contractor/witness as applicable

ACCEPTANCE

The above tender (as modified vide letters mentioned hereunder) is accepted by me for and on behalf of the Executive Director, AIIMS Deoghar for a sum of ₹. _____

(Rupees_____)

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

a)

b)

c)

For & on behalf of the Executive Director, AIIMS Deoghar

Signature.....

rkjh[k Dated .... Designation.....

FORM OF EARNEST MONEY (BANK GUARANTEE)

WHEREAS, contractor ..... (Name of contractor) (Hereinafter called "the contractor") has submitted his tender dated (date) for the construction of (name of work) (hereinafter called "the Tender")

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

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

THE CONDITIONS of this obligation are:

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

(2) If the contractor having been notified of the acceptance of his tender by the Engineer-in-Charge:
   (a) fails or refuses to execute the Form of Agreement in accordance with the Instructions to contractor, if required; OR
   (b) fails or refuses to furnish the Performance Guarantee, in accordance with the provisions of tender document and Instructions to contractor, OR
   (c) fails or refuses to start the work, in accordance with the provisions of the contract and Instructions to contractor, OR
   (d) fails or refuses to submit fresh Bank Guarantee of an equal amount of this Bank Guarantee, against Security Deposit after award of contract.

We undertake to pay to the Executive Director, AIIMS Deoghar either up to the above amount or part thereof upon receipt of first written demand, without the Executive Engineer, AIIMS Deoghar having to substantiates his demand, provided that in his demand the Executive Engineer , AIIMS Deoghar will note that the amount claimed by him is due to him owing to the occurrence of one or any of the above conditions, specifying the occurred condition or conditions.

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

DATE SIGNATURE OF THE BANK

WITNESS SEAL

(SIGNATURE, NAME AND ADDRESS)

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

PARTICULAR SPECIFICATIONS
&
SPECIAL CONDITIONS

1. 1 GENERAL

1.2 Wherever any reference to any Indian Standard Specifications of BIS occurs in the documents relating to this contract, the same shall be inclusive of all amendments issued there-to or revisions there of, if any, up to the date of receipt of tenders.

1.3 The contractor shall work according to the programme of work as approved by the Engineer-in-charge, for which purpose, the contractor shall submit a programme of the work within 15 days from the stipulated date of start of the work.

1.4 The contractor shall take instructions from the Engineer-in-charge for stacking of materials at site. No excavated earth or building materials shall be stacked on areas where the buildings, roads, services or compound walls are to be constructed.

1.5 Unless otherwise provided in the Schedule of quantities, the rates tendered by the contractor shall be all inclusive and shall apply to all heights, lifts, leads and depths of the building and nothing shall be payable to him on this account.

1.6 The working drawings appearing at para 8.1(iii) of conditions of contract in the form CPWD-8, shall mean to include both architectural and structural drawings respectively. The structural and architectural drawings shall be properly correlated before executing the work. In case of any difference noticed between architectural and structural drawings, final decision, in writing of the Engineer-in-charge shall be obtained by the contractor before proceeding further.

1.7 Some restrictions may be imposed by the security staff etc. on the working and for movement of labour, materials etc. The contractor shall be bound to follow all such restriction / instructions including issue of identity cards to all persons authorized by him to do work / visit the work site and nothing shall be payable on this account.

1.8 The contractor shall make his own arrangements for obtaining electric connections, if required, and make necessary payments directly to the department concerned.

1.9 The contractor shall conduct his work, so as not to interfere with or hinder the progress or completion of the work being performed by other contractor (s) or by the Engineer-in-Charge and shall as far as possible arrange his work and shall place and dispose of the materials being used or removed, so as not to interfere with the operations of other contractors, or he shall arrange his work with that of the others in an acceptable and coordinated manner and shall perform it in proper sequence to the complete satisfaction of Engineer-in-Charge. The contractor shall be responsible for any damage due to hindrance caused by him.

1.10 All the material related to the work execution shall be approved by Engineer-In-charge.

1.11 Any cement slurry added over base surface for bond or for continuation of concreting, for protecting reinforcement bars, its cost shall be deemed to have been included in the respective items, unless specified otherwise and nothing extra shall be payable nor extra cement shall be considered in the cement consumption on this account.

1.12 Stacking of materials and excavated earth including its disposal shall be done as per the directions of the Engineer-in-Charge. Double handling of materials or excavated earth if required at any stage shall have to be done by the contractor at his own cost.

1.13 No claim for idle establishment & labour, machinery & equipments, tools & plants and the like, for any reason whatsoever, shall be admissible during the execution of work as well as after its completion.

1.14 Only Stainless Steel screws shall be used unless otherwise specified.

1.15 **Work shall be carried out in professional manner with finished product serving the intended purpose with specified strength, durability and aesthetics.**

1.16 Work activities shall be executed in well thought out sequences such that consequent activities not adversely affecting previously done work. Nothing extra shall be payable to protect the works already done.

1.17 The contractor shall prepare all the needed shop drawings well in advance and get them approved before placing the order and execution of the item.

1.18 Contractor shall be able to claim final bill only after issuing site clearance certificate from Junior Engineer & Assistant Engineer.

1.19 Contractor shall submit all material in store which is to be consumed according to specifications during execution of work. It will be further issued by concerned JE and AE according to daily requirement.

1.20 All materials to be used during work shall be got approved from engineer in charge.

1.21 All samples of material shall be got approved from engineer in charge before execution of work.

1.22 The contractor(s) shall inspect the site of work before tendering and acquaint himself with the site conditions and **no claim on this account** shall be entertained by the department.

1.23 The tender shall see the approaches to the site. In case any approach from main road is required at or existing approach is to be improved and maintained for cartage of materials by the contractor, the same shall be provided, improved and maintained by the contractor at his own cost.

1.24 Contractor shall take all precautionary measures to avoid any damage to adjoining property. **All necessary arrangement shall be made at his own cost.** Any damage caused by the contractor to the contractor to existing building/ installation / roads / boundary walls shall be made good by him (the contractor) at his own cost.

1.25 The contractor shall take all precautions to avoid accidents by exhibiting necessary caution board day and night, speed limit, red flags, red lights and proving barriers. He shall be responsible for all damages and accidents caused to existing / new work due to negligence on his part. No hindrances shall be caused to traffic, running of hospital services during the execution of the work.

1.26 Royalty at the prevailing rates whenever payable shall have to be paid by the contractor on the boulders, metal, shingle, sand and bajri etc. Or any other material collected by him for the work direct to revenue authorities and **the department shall pay nothing extra for the same.**

1.27 The contractor shall provide at his own cost suitable weighing, surveying and levelling and measuring arrangements as may be necessary at site for checking. All such equipment shall be got calibrated in advance from laboratory, approved by the Engineer-In-Charge. **Nothing extra shall be payable on this account.**

1.28 Contractor shall provide permanent bench mark, flags tops and other reference points for the proper execution of work and these shall be preserved till the end of work. All such reference points shall be in relation to the level and location, given in the Architectural and plumbing drawings.

1.29 Water tanks, taps, sanitary, water supply and drainage pipes, civil fittings and accessories should confirm to byelaws and municipal body / corporation where CPWD specifications are not available. The contractor should engage licensed plumbers for the work and get the materials (fixture /fittings) tested by municipal Body / Corporation authorities wherever required at his own cost.

1.30 The contractor shall give performance test of the entire installations as per the standing specifications before the work is finally accepted and completion certificate is recorded by the Engineer- In -Charge. **Nothing extra whatsoever shall be payable to the contractor for the test.**

1.31 Any cement slurry added over base surface for the continuation of concreting for better bond is deemed to have been included in the items and **nothing extra shall be payable on this account, also the cement consumed on this account shall not be considered in theoretical consumption. For RCC work, only factory made round type cover block shall be used.**

1.32 The contractor shall bear all incidental charges for cartage, storage and safe custody of materials bought to site.

1.33 The work shall be carried out in accordance with the Architectural drawings and structural drawings submitted by contractor after due approval by the Engineer-In-Charge. Before commencement of any item of work, the contractor shall correlate all the relevant architectural and structural drawings issued for the and satisfy himself that the information available there from is complete and unambiguous.
The discrepancy, if any, shall be brought to the notice of the Engineer-In-Charge before execution of the work. The contractor alone shall be responsible for any loss or damage occurring by the commencement of the work on the basis of any erroneous and or incomplete information.

1.34 Other agencies will also simultaneously execute and install the works of internal electrical installations, sub- station / generating sets, air- conditioning, lifts, etc. for the work and the contractor shall afford necessary facilities for the same. The contractor shall leave such recesses, holes, openings trenches etc. as may be required for such related works (for which inserts, sleeves, brackets, conduits, base plates, clamps etc. Shall be supplied free of cost by the department unless otherwise specifically mentioned) and the contractor shall fix the same at the time of casting of concrete, stone work and brick work, if required, and **nothing extra shall be payable on this account.**

1.35 All materials obtained from Govt. stores or otherwise shall be got checked by the Engineer-In-Charge or his any authorized supervisory staff on receipt of the same at site before use.

1.36 All material shall only be brought at site as per programme finalized with the Engineer-In-Charge. Any pre-delivery of the material not required for immediate consumption shall not be accepted and thus not paid for.

1.37 The architectural drawings given in the tender other than those indicated in nomenclature of the items are only indicative of the nature of the work and materials / fixtures involved unless otherwise specifically mentioned. However, the work shall be executed in accordance with the drawings duty approved by the Engineer-In –Charge. Architectural drawings are available in the office of Engineer-In-Charge and can be seen.

1.38 Normally contractors shall not be allowed to work at night. Work at night shall, however, be allowed if the site conditions / circumstances at night, **no claim on this account shall be entertained. In such situations the contractor shall make available to the department proper means of transport such as vehicle at his own cost.**

1.39 Existing drains, cables, pipes, over-head wires, sewer lines and similar services encountered in the course of execution of work shall be protected against the damage by the contractor's own expense. The contractor shall not store materials or otherwise occupy any part of the site in a manned likely to hinder the operation of such services. In no case such services should be stopped to the existing buildings.

1.40 The contractor shall be responsible for the watch and ward/ guard of the buildings, safety of all fitting and fixtures provided by him against pilferage and breakage during the period of installations and thereafter till the building is physically handed over to the department. **No extra payment shall be made on this account.**

1.41 The day to day receipt and issue accounts of different / brands of cement shall be maintained separately in the standard Performa by the Jr. Engineer of work and which shall be duly signed by the contractor or his authorized representative.

1.42 The contractor shall be fully responsible for the safe custody of materials brought by him issued to even though the materials are under double lock key system.

1.43 The contractor shall procure the required materials in advance so that there is sufficient time for testing of the materials and clearance of the same before use in the work. Any predelivery of the materials not required for immediate consumption shall not be resorted to. The contractor shall provide at his own cost suitable weighing and measuring arrangements at site for checking the weight / dimensions as may be necessary for execution of work.

1.44 No payment shall be made to the contractor for any damage caused by rain, floods, earthquake or any other natural causes whatsoever during execution of work. The contractor at his own cost will make the damages to the work good and no claim on this account shall be entertained.

1.45 For construction works which are likely to generate malba / rubbish to the tune of more than a truck load, contractor shall dispose of malba, rubbish & other unserviceable materials and

wastes at his own cost to the notified specified dumping ground and under no circumstances these shall be stacked / dumped even temporarily, outside the construction premises.

1.46 Any damage done by the contractor to any existing work or work being executed by other agencies shall be made good by him at his own cost.

1.47 On the account of security consideration, there would be some restrictions, on the working hours, movement of vehicle for transportation of material and location of labour camp. The contractor shall be bound to follow all such restrictions and adjust the programme for execution of work.

1.48 The contractor shall also be required to follow the rules & restrictions imposed on working / movement/ stacking of materials by the local competent authority at all times. Nothing extra shall be payable on this account.

1.49 In case, there is any discrepancy between English version and corresponding Hindi version, if provided, then the provisions in English version will prevail.

1.50 The contractor will have to work as per schedule given by the Engineer-In-Charge.

1.51 The contractor shall remove all splashes from doors, windows and floors etc. if the contractor fails to remove the same 10% of gross value of the bills would be kept in deposit from each bill simultaneously.

1.52 The contractor submits the authenticated copies of itemized bills of the material which has to be entered in the M.A.S. Register viz steel, Cement, Bitumen, Paint water proofing material or any other item suggested by the technical sanction authority before settling payment.

1.53 The contractor shall pump the concrete wherever necessary to expedite the progress of work. **Nothing extra shall be paid on this account.**

1.54 Sample of building material, fitting and other articles required for execution of work shall be got approved from the Engineer-In-Charge before use in the work. The quantity of samples brought by the contractor shall be judge by standards laid down in the relevant BIS specification.

1.55 All material and fittings brought by the contractor to the site for use shall conform to the samples approved by the Engineer-In-Charge which shall be preserve till the completion of work. If a particular brand of material is specified in the item of work in schedule of quantity, the same shall be used after getting the same approved from Engineer-In-Charge. Wherever brand/quality of material is not specified in the items of work, the contractor shall submit the samples as per suggestive list of brand name given in the tender document /particular specifications for approval of Engineer-In-Charge. For all other items, materials and fitting carrying BIS mark shall be used with approval of Engineer-In-Charge. Wherever BIS marked material / fittings are not available, the contractor shall submit samples of material/fittings manufactured by firm of repute conforming to relevant specification or IS codes and use the same only after getting the approval of Engineer-In-Charge. To avoid delay, contractor should submit samples as stated above well in advance so as to give timely order for procurement. If any material, even though approved by Engineer-In-Charge is found defective or not conforming to specifications shall be replaced/removed by the contractor at his own risk and cost**.**

1.56 The contractor shall ensure quality construction in a planned and time in bound manner. Any sub-standard material/work beyond set-out tolerance limit shall be summarily rejected by the Engineer-In-Charge& contractor shall be bound to replace/ remove such sub-standard/defective work immediately.

1.57 BIS marked items (except cement and steel) required on the work shall be got tested. Only important tests shall be carried out. The frequency of such tests shall be 25%of the frequency specified in the CPWD specifications 2023 Vol. I to II with up to date correction slips. for certain items, if the frequency of test is not mentioned in CPWD specifications then relevant IS code shall be followed and tests shall be carried out @25% of frequency specified therein.

1.58 BIS marked materials except otherwise specified shall be subjected to quality test besides testing of other materials as per the specifications described for the item/material. Wherever BIS marked materials are brought to the site of work, the contractor shall furnish manufacturer's test certificate or test certificate from approved testing laboratory to establish that the material produced by the contractor for incorporation in the work satisfies the provisions of BIS codes relevant to the material and /or the work done.

1.59 Sample for testing –The contractor shall provide samples of materials required for testing free of charge. The cost of test shall be borne by the contractor / department in the manner indicate below: -

(a) By the contractor, if the results show that the material does not conform to relevant specifications.

(b) By the department, if the result show that the material conforms to relevant specifications. **All other expenditure required to be incurred for Test in lab (NABL)/MSME LAB ,talking samples, conveyance, packing etc. shall be borne by the contractor himself.**

1.60 However, if any load testing or special testing is to be done for concrete whose strength is doubtful, the cost of the same shall be borne by the contractor.

1.61 All necessary tests as per the NIT/CPWD specifications/ relevant BIS codes shall be carried out on all the materials whether ISI marked or otherwise. Wherever NIT/CPWD specifications/relevant BIS Codes do not specify the frequency of tests, the same shall be carried out as per the directions of the engineer –in-charge. Nothing extra whatsoever shall be payable on this account.

1.62 The contractor shall ensure quality control measures on different aspects of construction methodologies to be adopted.

1.63 Lists of approved makes and brand of materials for civil works and sanitary works are annexed hereto. Makes and brands of materials specified therein shall only be used on the work. The contractor shall submit brand/ make of various materials to be used for the approval of Engineer-In-Charge along with samples.

1.64 **All material shall be brought as per programme finalized with the Engineer-In-Charge. Any pre delivery of the material, not required for immediate consumption shall not be accepted and thus not paid for**.

1.65 Samples including brand/quality of materials and fitting to be used in the work shall be got approved from the Engineer-In-Charge, well in advance of actual execution and shall be preserved till the completion of the work.

1.66 The rates for all items of work shall, unless clearly specified otherwise, include cost of all labor, material, tools, and plants and other inputs involved in the execution of the items and **nothing extra shall be payable on this account.**

1.67 The contractor shall quote all-inclusive rates against the items in the schedule of quantities and **nothing extra shall be payable for any of the conditions and specifications** mentioned in the tender document unless specially specified otherwise.

1.68 Unless otherwise specified in the schedule of quantities, the rates for all items, shall be considered as inclusive of pumping / bailing out water wherever necessary for which **no extra payment shall be made.**

1.69 The rate for all items, in which the use of cement is involved is inclusive of charges for curing.

1.70 The foundation trenches shall be kept free from water work below ground level are in progress.

1.71 The contractor shall indemnify the Govt. against any claims or obligation rising out of any damage to adjacent property, structure or to building work done by him.

1.72 In case service are encountered during excavation /earth work and such services are required to be shifted, the contractor is bound to carry out the shifting operation as per guidance/ instructions and with the approval of the Engineer-In-Charge. However, necessary payments shall be made in this regard as per provision of the agreement.

1.73 Many other agencies would be executing work simultaneously at site. The contractor shall maintain proper co-ordination with other agencies in maintaining progress of work. In case of any dispute, the decision of the Engineer-In-Charge shall be final and binding.

1.74 LABOUR CESS @ 1% OF THE GROSS VALUE OF THE WORK DONE WIL BE DEDUCTED FROM EACH RUNNING & FINAL BIL AS PER GOVT. NOTIFICATION.

1.75 **RECOVERY FOR Water & Electricity charges @ 1% OF THE GROSS VALUE OF WORK DONE SHALL BE MADE FROM THE BILL.**

1.76 **THE CONTRACTOR COMPLIES WITH THE INSTRUCTION CONTAINED TO DPCC OREDER FOLLOWS:-**

(a) The dismantle material /building rubbish received from dismantling/demolishing shall be dumped to the dumping ground in properly covered truck with precaution.

1.77 The agency has to deposit 50% of paint material before the start of work at site calculated as per theoretical consumption calculated.

2.0 CONDITION FOR CEMENT: -

2.1 The Contractor shall procure 43 grade Ordinary Portland cement (conforming to IS : 8112) or Portland slag cement (conforming to IS : 455) or Portland Pozzolana Cement (PPC) (Fly ash based) – conforming to IS : 1489 (Part-I) as required in the work, from reputed manufactures of cement such as ACC, Ultratech, Vikram, Shree Cement, Ambuja, Jaypee Cement, Century Cement & J.K. Cement or from any other reputed cement Manufacturer having a production capacity not less than one million tons per annum.

The tenderers may also submit a list of names of cement manufacturers which they propose to use in the work. The tender accepting authority reserves right to accept or reject name(s) of cement manufacture(s) which the contractor proposes to use in the work. No change in the tendered rates will be accepted if the tender accepting authority does not accept the list of cement manufactures, given by the tenderer, fully or partially.

Supply of cement shall be taken in 50 Kg bags bearing manufacture's name, batch No. & ISI marking. Samples of cement arranged by the contractor shall be taken by the Engineer-in-charge and got issue in accordance with provisions of relevant BIS codes. In case test results indicate that the cement arranged by the Contractor does not conform to the relevant BIS codes, the same shall stand rejected and shall be removed from the site by the Contractor at his own cost within a week's time of written order from the Engineer-in-charge to do so.

If Portland Pozzolana cement or Portland slag cement is used, suitable modification in deshuttering time etc. shall be done if need be as per specifications and standards and as directed by Engineer – in – charge and nothing extra shall be payable on this account.

No extra payment / deduction shall be made from the payment to the contractor for using any of the above type of cement.

2.2 The cement shall be brought at site in bulk supply of approximately 50 tonnes or as decided by the Engineer - in - charge.

2.3 For each grade / type, cement bags shall be stored in two separate godowns, one for tested cement and the other for fresh cement (under testing) constructed by the contractor at site of work as per sketch shown in General conditions of contract for CPWD works 2020 with weather proof roofs and walls, for which no extra payment shall be made. The size of the cement godown is indicated in the sketch for guidance only. The actual size of godown shall be as per site requirements and as per the direction of the Engineer in charge and nothing extra shall be paid for the same. The decision of the Engineer-in-charge regarding the capacity required/needed will be final. However, the capacity of each godown shall not be less than 100 tonnes. Each godown shall be provided with a single door with two locks. The keys of one lock shall remain with CPWD Engineer-in-charge or his authorized representative and that of other lock with the contractor at the site of work so that the cement is issued from godown according to the daily requirement with the knowledge of both the parties. The account of daily receipt and issue of cement shall be maintained in a register in the prescribed Proforma and signed daily by the contractor or his authorized agent in token of its correctness.

2.4 The cement shall be got tested by Engineer –in –charge and shall be used on the work only after satisfactory test results have been received. The contractor shall supply free of charge the cement required for testing including its transportation cost to testing laboratories. The cost of tests shall be borne by the contractor / Department in the manner indicated below: -

(a) By the contractor, if the results show that the cement does not conform to relevant BIS codes.

(b) By the Department, if the results show that the cement conforms to relevant BIS codes.

2.4.1 All other charges of sampling, packing and transportation of sample shall also be borne by the contractors.

2.5 The actual issue and consumption of cement on work shall be regulated and proper accounts maintained separately for each type of cement, as provided in clause 10 of the contract. The theoretical consumption of cement shall be worked out as per procedure prescribed in Clause 42 of the contract and shall be governed by conditions laid therein. However, for consumption lesser beyond permissible theoretical variation recovery shall be made in accordance with conditions of contract at Schedule A to F (CPWD-7), without prejudice to action for acceptance of work/item at reduced rate or rejection as the case may be. In case of excess consumption, no adjustment shall be made.

(i) Cement brought to site and cement remaining unused after completion of work shall not be removed from site without return permission of the Engineer-in-charge.

(ii) Damaged cement shall be removed from the site immediately by the contractor on receipt of notice in written. In case if he does not do within three days or receipt of same notice, the Engineer-in-charge shall get removed at the site of the contractor.

2.6 Cement brought to site and cement remaining unused after completion of work shall not be removed from site without written permission of the Engineer-in-charge.

3.0 CONDITIONS FOR REINFORCEMENT STEEL: -

3.1 The contractor shall procure TMT bars of ~~Fe 415 / Fe 415D / Fe 500/~~ Fe 500D ~~/ Fe 550 / Fe 550D~~ grade from primary producers such as SAIL, Tata Steel Ltd., RINL, Jindal Steel & Power Ltd. and JSW Steel Ltd. or any other producer as approved by CPWD who are using iron ore as the basic raw material / input and having crude steel capacity of 2.0 Million tonnes per annum and above.

In case of non-availability of steel from primary producers, use of TMT reinforcement bars procured from secondary producers will be allowed subject to fulfillment of following conditions:

a. The grade of the steel such as Fe ~~415 / Fe 415D / Fe 500 /~~ Fe 500D ~~/ Fe 550 / Fe 550D~~ or other grade to be procured is to be specified as per BIS: 1786 - 2008.

b. The secondary producers must have valid BIS license to produce HSD bars conforming to IS 1786: 2008. In addition to BIS license, the secondary producer must have valid license from either of the firms Tempcore, Thermex, Evcon Turbo & Turbo Quench to produce TMT Bars.

c. The TMT bars procured from primary producers and ISPs shall conform to manufacture's specifications.

d. The TMT bars procured from secondary producers shall conforms to the specifications as laid down by Tempcore, Thermex, Evcon, Turbo and Turboquench as the case may be.

e. TMT bars procured either from primary producers or secondary producers, the specifications shall meet the provisions of IS 1786: 2008 pertaining to ~~Fe 415 / Fe 415D / Fe 500 /~~ Fe 500D ~~/ Fe 550 / Fe 550D~~ or other grade of steel as specified in the tender.

3.2 Samples shall also be taken and got tested by the Engineer-in-Charge as per the provisions in this regard in relevant BIS codes. In case the test results indicate that the steel arranged by the contractor does not conform to the specifications as defined under para (c) & (d) above, the same shall stand rejected, and it shall be removed from the site of work by the contractor at his cost within a week time or written orders from the Engineer-in-Charge to do so.

In case contractor is permitted to use TMT reinforcement bars procured from secondary producers then:

(i) The base price of TMT reinforcement bars as stipulated under schedule 'F' shall be reduced by Rs. 6700/- MT. However, for operation of provisions of clause 10CA in such case, the indices for TMT reinforcement bars of secondary producers will be considered same as for primary producers.

(ii) The rate of providing & laying TMT reinforcement bars as quoted by the contractor in the tender shall also be reduced by Rs. 8.00 per kg.

3.3 The steel reinforcement bars shall be brought at site in bulk supply of 25 tonnes or more as decided by the Engineer in charge.

3.4 The steel reinforcement bars shall be stored by the contractor at site of work in such a way as to prevent distortion and corrosion and nothing extra shall be paid on this account. Bars of

different sizes and lengths shall be stored separately to facilitate easy counting and checking.

3.5 For checking nominal mass tensile strength bend test re-bend test etc. specimen of sufficient length shall be cut from each size of the bar at random at frequency not less than that specified below:

Dia of bar	For consignment below 100 tones	For consignment above 100 tones
Under 10 mm	One sample for each 25 tonnes or part thereof	One sample for each 40 tonnes or part thereof
10mm to 16mm	One sample for each 35 tonnes or part thereof	One sample for each 45 tonnes or part thereof
Over 16mm	One sample for each 45 tonnes or part thereof	One sample for each 50 tonnes or part thereof

3.6 The contractor shall supply free of charge the steel required for testing including its transportation to testing laboratories. The cost of tests shall be borne by the contractor.

3.7 All other charges of sampling, packing and transportation of sample shall also be borne by the Contractor.

3.8 The actual issue and consumption of steel on work shall be regulated and proper accounts maintained as provided in clause 10 of the contract. The theoretical consumption of steel shall be worked out as per procedure prescribed in clause 42 of the contract and shall be governed by conditions laid therein. In case the consumption is less than theoretical consumption including permissible variations, recovery at the rate so prescribed shall be made. In case of excess consumption no adjustment need to be made.

3.9 Steel brought to site and remaining unused shall not be removed from site without the written permission of Engineer-in-Charge**.**

3.9 (i) Reinforcement including authorized spacer bars and lap pages shall be measured in length for different diameters as actually (not more than as specified in the drawings) used in the work nearest to a centimeter. Wastage and unauthorized overlaps shall not be measured.

(ii) The standard sectional weights referred to shall be as in Table 5.4 in para 5.3.4 in revised CPWD specifications 2009 Vol. I will be considered for conversion of length of various sizes of TMT bars in to standard weight.

(iii) Record of actual sectional weights shall also be kept dia wise and lot wise. The average sectional weight for each diameter shall be arrived at from samples from each lot of steel received at site. The decision of the Engineer in charge shall be final for the procedure to be followed for determining the average sectional weight of each lot. Quantity of each diameter of steel received at site of work each day will constitute one single lot for the purpose. The weight of steel by conversion of length of various sizes of bars based on the actual weighted average sectional weight shall be termed as Derived Actual Weight.

(a) If the derived weight as in sub-para (iii) above is less than the standard weight as in sub-para (ii) above, then the Derived Actual Weight shall be taken for payment.

(b) If the derived actual weight is found more than the standard weight, than standard weight as worked out in sub para (ii) above shall be taken for payment. Nothing shall be paid extra for the difference in Derived/ Actual Weight and standard weight.

The contractor has to obtain vouchers and furnish test certificate to the Engineer-in-charge in respect of all the lots of Steel brought by him from approved suppliers at the site of work.

3.10 Every care should be taken to avoid mixing different types of grades of bars in the same structural members as main reinforcement to satisfy relevant clause of IS: 456. In case of buildings, wherever the situation necessitates, the changeover shall be permitted only from any one level onwards. In case of foundations, all foundation elements (footings and grade beams) shall have the same kind of steel. In the case of columns, all structural elements up to the level of change, where the changeover is taking place should have the same kind of steel as those in columns.

3.11 The reinforcing steel brought to site of work shall be stored on brick / timber platform of 30 / 40 - cm height, nothing extra shall be paid on this account.

4.0 SAFETY MEASURES AT CONSTRUCTION SITE

In order to ensure safe construction, following shall be adhered for strict compliance at the site: -

(i) The work site shall be properly barricaded.

(ii) Adequate signage's indicating 'Work in Progress – Inconvenience caused is Regretted' or Diversion Signs shall be put on the sites conspicuously visible to the public even during night hours. These are extremely essential where works are carried out at public places in use by the public.

(iii) The construction malba at site shall be regularly removed on daily basis.

(iv) All field officials and the workers must be provided with safety helmets, safety shoes and safety belts.

(v) Proper MS pipe scaffoldings with work – platforms and easy-access ladders shall be provided at site to avoid accidents.

Necessary First-Aid kit shall be available at the site.

The above provisions shall be followed in addition to the provisions of General Condition of Contract.

5.0 SPECIFICATIONS FOR FLY ASH BRICKS - All fly ash bricks as brought to the site shall conform to the strength & durability parameters as prescribed in the tender and CPWD specifications.

6.0 The contractor shall submit 'Method Statement' for the approval soon after the award of work. 'Method Statement' is a statement by which the construction procedures for important activities of construction are stated, checked and approved. Method Statement shall have description of the item with elaborate procedures in steps to implement the same. The specification of the materials involved their testing and acceptance criteria, equipments to be used, precautions to be taken, mode of measurements etc.

6.1 Formwork for exposed concrete surfaces: -

6.1.1 Where it is specifically shown on the drawings to have original fair face finish of concrete surface without any rendering of plastering, formwork shall be carried out by using plywood on steel plates of approved quality.

6.1.2 The forms shall be constructed so as to produce a uniform and consistent texture and pattern on the face of the concrete. The formwork shall be placed so that all horizontals are constructed of lumber and are not paneled and the formwork joints shall be staggered.

6.1.3 To achieve a finish which shall be free of board marks, the formwork shall be faced with plywood or equivalent material in large sheets. The sheets shall be arranged in an approved pattern. Whenever possible, joints between sheets shall be arranged to coincide with architectural feature, sills, window heads or change in direction of surface. All joints between panels shall be vertical

or horizontal unless otherwise directed. Suitable joints shall be approved between sheets. The joints shall be arranged and fitted so that no blemish or mark is imparted to the finished surfaces.

6.1.4 Forms for exposed concrete surfaces shall be constructed with grade strips (the underside of which indicate top of pour) at horizontal constructions joints, unless the use of groove strips is specified on the drawings. The reset forms shall be tightened against the concrete so that the forms will not be spread and permit abrupt irregularities or loss of mortar. Supplementary form ties shall be used as necessary to hold the reset forms tight against the concrete.
6.1.5 For fair faced concrete, the position of through bolts will be restricted and generally as indicated on the drawings.
6.1.6 Plywood and steel plates used in the formwork for obtaining exposed surfaces shall be got approved from Engineer-in-charge on each use. However, no forms will be allowed for reuse if it is doubtful to produce desired texture of exposed concrete.
6.1.7 Cement of only approved shade shall be used preferably of single lot to achieve integrity of texture.

6.2 Class of Surface Finish: -

6.2.1 For Beams & Slabs**:**

The finish shall be uniform, dense and smooth. no grout, no grain pattern, no crazing and no major blemishes shall be permitted. Abrupt irregularities not exceeding 3mm and gradual irregularities less than 5mm in 2m length only shall be permitted.

6.2.2 For Columns/Wall/Fins:

The finish shall be uniform and smooth leveling the surface of the compacted concrete shall be done with a screed board with power floating the surface and over that steel trowelling the surface under firm pressure characteristics of finish shall be brush marks < 3mm gradual irregularities less than 10mm in 2m.

6.3 Tolerance in Finished Concrete: -

The formwork shall be so made as to produce a finished concrete true to shape, lines, level, plumb and dimensions as shown in the drawings subject to the following tolerance unless otherwise specified in this specification or drawings.

6.4 WALL/COLUMN/FINS:

6.4.1 Variation from the plumb	± 6mm	Upto 3m height
6.4.2 Variation from the plumb of Conspicuous liner	± 6mm	Upto 6m height
6.4.3 Variation in the size of wall openings	(+)15mm (-) 6mm	
6.4.4 Variation in parapet wall thickness		
(a) Upto 30cm thickness	± 6mm	

6.5 SLAB, BEAM & GIRDER FORMS:

6.5.1 Variation from the level or from the specified grid for beam soffit before removal of shores,

(a) In any 3m	± 6mm
(b) In any 6m	± 10mm

All the tolerances mentioned above shall apply to concrete dimensions only, and not to positioning of vertical steel or dowels. The tolerances given above are specified for local aberration in the finished concrete surface and should not be taken as tolerance for the entire structure taken as whole for the setting and alignment of formwork. Any error, within the above tolerance limits, or any other if noticed in any of the structure after part or portion stripping of forms, shall be corrected in the subsequent work to bring back the structure to its true line, level and alignment.

General Terms and Conditions (Part-1)

The work shall be carried out as per CPWD / BIS Specification and relevant IS codes. In case of discrepancy between technical specification and BOQ, the BOQ prevails.

SCOPE : The specification covers the general requirement for **Providing High Mast Flood Lighting**

1. Bidder should submit lighting design prepared by manufacturers of light fitting given in the tender document using AGI 32 or Dialux software.

2. **Lux level shall be as per National Lighting code 2010 and upto date amendments. Lux levels shall be verified before final takeover of High Mast lights. Light Led fixtures will be accepted after compliance of lux levels as per National Lighting code 2010.**

3. Bidder should choose the wattage of light fixture not less than/nearest to the wattage mentioned in the tender document with prior approval from the Engineer-in Charge.

4. The successful bidder shall produce structural design for high masts vetted by a Govt. approved Structural Consultant with certificate attested by the concerned issuing authority and such certificate shall be produced along with design plan before execution of work.

5. The steel grade of High Mast used shall be of S355J0 grade and final weight given in structural calculations of high mast vetted by a Govt. approved Structural Consultant with certificate attested by the concerned issuing authority shall be checked during final factory inspection and compliance is mandatory for giving dispatch clearances of high mast. Else the masts shall be liable to be rejected by AIIMS Deoghar.

6. The Mast, Foundation and electrical drawing should be approved before commencement of work

7. All safety measures shall be adopted while execute (E & C) the work.

8. The bidder must visit the site and access the quantity & material. Even if certain items are not included within the tender, but are essentially required for completion of the job, the bidder have to will do the same without any extra cost.

9. **All hardware items such as screws, thimbles, brass compression glands, G.I. wires and any other items which are essentially required for completing an item as per specifications will be deemed to be included in the item even when the same have not been specifically mentioned. Nothing extra shall be paid for the same**

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

11. Any conduit which is not be wired by the contractor shall be provided with GI fish wire for wiring by some other agency subsequently. Nothing extra shall be paid for the same.

12. While laying conduit, suitable junction boxes shall be left for pulling the wires.

13. Copper wire shall be FRLS PVC insulated multi-stranded conductor. Termination of multi-stranded conductors shall be done using crimping type thimbles at both the ends. Nothing extra shall be paid for the same.

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

15. The proof of purchase in the form of Invoice/cash memo, of all the major components such as Cables, Wires, Fittings, MCB DB's, Geysers, Exhaust fans etc. shall have to be produced by the contractor at the time of final bill or as and when demanded by the deptt.

16. Test report of all the XLPE insulated PVC sheathed armoured power cables used at site of work shall have to be submitted by the contractor at the time of submission of final bill.

17. Where switches/sockets/telephone outlets are to be provided, the same shall be of only one make.

18. The MCB distribution boards shall be factory fabricated in the works of the manufacturer of the MCB's of any of the makes specified and the same shall be duly prewired in the works. The board shall be brought to site in ready for installation condition. The MCBs and the MCB distribution board shall be of the same make.

General Terms & Conditions (Part-2)

The conditions and directions listed in this Section shall be considered as an extension to and not as a limitation of the obligations of the Contractor.

The specifications generally applicable to this work shall be as per C.P.W.D. Specifications 2023 for electrical works (part I & II) internal except as otherwise specified in the description of items given in the Schedule of Quantities or in the attached Technical Specifications. These specifications will override the C.P.W.D. specifications. The requirements of these specifications will be fulfilled by the contractor within the tendered rates and without any extra charge. The item rates quoted will be deemed to have taken these specifications into account.

1. The electrical work will be carried out in accordance with the General Specifications 2023 for electrical works in (part I) internal part II external while complying in all respects with the requirements of the latest Indian Electricity Rules in force at the time of execution.

2. The electrical work shall be carried out simultaneously with the civil and interior works and will be continued till it is completed satisfactorily along with the completion of essential portions of building work.

3. If any minor alterations are found necessary, the contractor shall do the same within tendered rates.

4. The work shall be carried out in the best workmanlike manner and any defect in the work or changes in the design pointed out before execution shall be carried out by the contractor within the tendered rates.

5. The contractor shall employ adequate labour to complete the work within the stipulated time and make his own arrangements for housing labour and storage of materials etc. A full time Electrical & Civil Engineer as per general condition & Schedule F of contract shall be employed by the contractor who will remain at site of work to receive orders or any other instructions from the Engineer-in charge.

~~6. During the progress of work, completed portions of the buildings may be occupied and put to use by the owner. However, the contractor will remain fully responsible for maintenance of power to these areas even while ensuring work proceeds unimpeded on other fronts till the entire work covered by this contract is satisfactorily completed by him and taken over by the Owner~~.

7. The contractor shall obtain for himself, on his own responsibility and at his own expense, all the information which may be necessary for the purpose of tendering and for entering into a contract, and must inspect the site, examine and study the specifications, drawings and the design of the electrical installations, the building plans etc. If the drawings are supplied to the contractor for tender purposes, the same must be returned in good condition with the tender. The contractor shall also make local and independent inquiries, if required.

8. All tender rates will include the cost of materials, erection, connections, labour, supervision, tools, plant, transport, all taxes, duties, contingencies, breakage, wastage, sundries and scaffolding, i.e. they should be for an item complete in all respects.

9. The contractor, while executing the work, shall conform to the provision of Government Acts relating to the work and to the regulations and Bye laws of the local authorities, and of the company to whose system of supply the installation is proposed to be connected. The contractor shall give all notices, required by the Acts, Regulations or Bye-Laws. He will also undertake to provide test certificates and drawings as required and will make necessary arrangements to procure the electricity supply. The contractor shall also obtain all approvals for the items of work done under this contract from the appropriate authorities. All inspection fees or submission fees paid by the contractor will be reimbursed by the owner against valid official receipts. Contractor

shall possess a valid electrical contractor's license issued by the inspectorate of the local government.

10. Samples of materials and fabrication drawings will be submitted by the contractor according to the schedule/ specification. Any deviation from the schedule/ specifications must have the written consent of the Engineer-in-charge. No approval given by the Engineer-in-charge to any samples or drawings submitted by the contractor shall in any way exonerate the contractor from his liability to carry out the work in accordance with the terms of contract.

11. Contractor shall at each relevant stage of the project estimate the quantity of materials required to execute the works as detailed in the drawings and Specifications as per various items of work and procure accordingly.

Additional Terms & Conditions

1. General conditions of contract for Central PWD Works 7/8 (Tender of Form) shall be part of the agreement.
2. The work in general shall confirm to the CPWD specifications for electrical works (Internal part 1)Updated & CPWD specifications for electrical works (External part 1) Updated up to date correction slips issued as on date of receipt of the tender and the “Specifications for works”.
3. The work shall be carried out strictly as per CPWD specifications Updated, Part I & II with up to date correction slips. Wherever no specification is available in the above said document, drawings and specifications supplied with bill of quantities shall be applicable
4. As built drawings for all services shall be submitted by the contractor within 30 days of completion else contractor shall be liable for paying compensation for the same as per CPWD provisions.
5. The Contractor shall have to clear the site for the work of all overlying rubbish /garbage/dumped refuse material prior to commencement of the work in case required at no extra cost. The contractor shall take approval from the Engineer /Officer in Charge in writing for collection and stacking of materials.

6. The contractor must follow CPWD Safety Code as provided in general conditions of contract for CPWD Works.
7. Any damage done by the contractor or his workmen to any existing work during the course of execution of the work shall be made good by him at his own cost.
8. Contractor shall clear the site thoroughly of all rubbish etc. left out of his materials immediately on completion of the work and properly keep the site clean around the building to the satisfaction of the Engineer- in-Charge.
9. The preference of the codes will be IS codes.
10. The rates are inclusive of all staging, material and labour as required for the works. The items in the bill of quantities include all the materials, labour, and installation, complete as a finish items unless otherwise stated.
11. Unless specifically mentioned otherwise, quoted Rates shall be deemed to include work to be carried out at all curvatures, heights, depths, inclinations and locations, and in wet/foul locations, as and when they are encountered. The rates quoted for the various works as specified in the Priced Schedule of Quantities are work in all types of soils/rock and prevailing Site conditions including earth work, excavation, shoring, execution of various other items of work, i.e., laying of pipes, joining, concreting, masonry, plastering, etc. in and under water and dewatering as required. Nothing extra is payable on this account.
12. All security precautions shall be taken during dismantling work. The site shall be fenced /barricaded with suitable material during construction period .No payment shall be made for fencing/barricading work. Fencing/barricading shall be done immediately after possession of site and shall be removed after completion of construction period
13. No space on site/otherwise for labour huts shall be provided by AIIMS Deoghar, cost of same shall be borne by contractor.

14. The general condition of contract for Central P.W.D. Works has reference of various laws /acts /rules. The settlement of any disputes and arbitration, only Indian arbitration and conciliation act 1996 shall be applicable.

15. The material shall be got approved by the Engineer-In-charge, AIIMS DEOGHAR before the execution of the work.

16. In case any specific brand of material has been specified either the same brand or of approved make of same specifications shall be used. The contractor shall take approval in advance for all such materials.

17. The contractor shall prepare proper Shop/Fabrication drawings and shall seek prior approval for these from Architect / CONSULTANT / AIIMS DEOGHAR prior to construction of items.

18. As built drawings shall be prepared by the contractor for all services works in hard and soft copies.This shall be pre requisite before the submission of the Final bill.

19. Costs for all materials and labour for the preparation of samples, market research, etc. shall be borne by the Contractor within his quoted Rates and nothing extra shall be payable for this. The works shall not be proceeded with without approval of the sample. In case sample is rejected and works cannot be proceeded with the AIIMS DEOGHAR shall be at liberty to terminate the contract and the Contractor shall have no claim for the works under such circumstances whatsoever.

20. The contractor should take utmost care to avoid any damage to the existing structures, walls , finishing , flooring, electrical works/cables, telephone cables, false ceiling, sprinkler system, fire alarm etc. in place. In case of any damage, it would be the responsibility of the contractor to restore the same immediately.

21. In case of Non DSR items, though every care is taken to explain the intent of such items, however the rate quoted by tenderers for such items should cover the completeness of the item irrespective of inadequacy in explanation if any.

22. In case of delay in local body approvals holding the commencement of works, suitable extension of time and rescheduling of milestones shall be accorded without any financial implications and the contractors shall have no claim towards any extra payment on such account whatsoever.

23. The contractor may have to carry out the works in odd hours of day and night as per academic schedule of the Institute and no extra charges shall be payable.

24. All unwired conduits shall be provide with pull wire and protected from clogging. No extra shall be payable for the same.

25. The works may have to be suspended from time to time as per academic requirements. No extras/escalation will be payable except for suitable extension of time of upto time as per GCC of the CPWD.

26. All protocols/guidelines for preventing spread of Covid 19/ Cov2 SARS virus strains need to be followed by the Contractor/s as per Govt . / AIIMS DEOGHAR authorities Guidelines issued from time to time.

27. Necessary guidelines for Environmental Protection as per local /State Govt/ Central Govt Authorities as applicable shall be followed by the Contractor/s. Extension of time will be granted as justified without any financial implications.

28. Care must be taken to protect all buried /overhead services and Contractor shall make good the same in case of any damage owing to negligence to protect the same.

NOTE :- All electrical connections including termination of cables along with required lugs , joints , cable glands etc and wires in High Mast Feeder pillar, Main Feeder pillar, LT panels shall be in scope of contractor. No additional payments will be made for material or making connections.

Special Terms and Conditions

1. **COMPLETION TESTS**:

On completion of installations the following tests shall be carried out:-

a) Insulation Resistance Test- Between phase-to-phase, phase-to-neutral and phase-to-earth;

b) Polarity Test of Switch;

c) Earth Continuity Test;

d) Earth electrode resistance

e) Or any other test as directed by Engineer-in-charge

2. MAINTAINANCE DURING DEFECTS LIABILITY PERIOD (24 Months)

The completed installation inclusive of wiring, light fittings (where supplied by the contractor) shall not be finally taken over till acceptance certificate is issued to the contractor. Thereafter the Defects Liability Period shall commence during which the contractor shall be liable for:

a) The replacement of any defects that may develop in goods of his own manufacture or supplied by him.

b) The rectification of all the defects arising out of defective workmanship of the Contractor.

c) Until the installation is finally taken over, the contractor shall have the right of entry to the premises, at his own risk and expense, for maintaining the installation in proper order. To facilitate maintenance after the handing-over, the Contractor should clearly indicate the detailed distribution diagram on Electrical Panel and Distribution Board .

All Panels and MDBs, etc. shall be properly painted, labeled and numbered as detailed in the Technical Specifications.

3. REGULATIONS AND STANDARDS

The installation shall conform in all respects to Indian Standard Code of Practice for Electrical Wiring Installations IS:732-1989. It shall also be in conformity with Indian Electricity Rules and Regulations, National Electric Code, National Building Code, CPWD specifications for Electrical works Part I to V and requirements of the Local Electric Supply Authority. In general, all materials, equipment and workmanship shall conform to the Indian Standards, specifications and Code. Some of the applicable codes/standards are under:

Sl.No	**STANDARDS**	**TITLE**
Code of Practice / Guide		
1	IS : 732 – 1989	Code of Practice for Electrical wiring installations.
2	IS : 4648 – 1968	Guide for Electrical layout in residential buildings
3	IS : 80614 – 1976	Code of Practice for Design, installation and maintenance of service lines up to and including 650V.
4	IS : 7752 (Part-1) - 1976	Code of Practice for interior illumination : General requirements and Recommendations for welding interiors.
5	IS : 4347 – 1967	Code of Practice for hospital lighting
6	IS : 6665 – 1972	Code of Practice for industrial lighting
7	IS : 2672 – 1966	Code of Practice for Library lighting

8	IS : 10118 (Part-1) - 1982	Code of Practice for selection, installation and maintenance of switcher and Control gear : Installation.
9	IS : 4146 – 1983	Application guide for voltage transformers.
10	IS : 3043 – 1987	Code of practice for earthing.
11	IS : 5216 (Part-2) - 1982	Guide for safety procedures and practices in electrical work General.
12	IS : 4237 – 1982	General requirements for switchgear and control gear for voltages not exceeding1000 V AC or 1200 V DC.
13	IS : 6875 - (Part-1) - 1973	Control switches (Switching devices for control and auxiliary circuits including 1000 V AC and 1200 V DC : General requirements and tests.
14	IS : 10027 – 2000	Composite units of Air-Break switches and rewireable type fuses for voltages not exceeding 650 V AC.
15	IS : 4064 (Part-1) - 1978	Composite units of Air-Break disconnector, Air-Break switch disconnector and fuse- combination units for voltages not exceeding 1000 V AC or 120 V DC : General requirements.
16	IS : 8828 – 1996	Electrical accessories - circuit breakers for over current protection for household and similar installation.
17	IS : 2516 (Part-1/Sec01)- 1985	Circuit-Breaks : Requirements and tests : Voltages not exceeding 100 V AC or 1200V DC.
18	IS : 5039 – 1983	Distribution pillars for Voltages not exceeding 1000 V AC or 1200 V DC.

4. CODES OF PRACTICE

The electrical installation work shall be carried out in accordance with India Standard Code of Practice for Electrical Wiring Installation IS:732-1989 and IS: 2274-1963. It shall also be in conformity with the current Indian Electricity Rules and Regulations of the Local Electricity Supply Authority and Fire Insurance Regulations, so far as these become applicable to the installation. Electrical work in general shall be carried out as following CPWD Specifications with upto date amendment.

CPWD Specifications for Electrical Works Part – I (Internal) Part – II (External) - 2023

Wherever this specification calls for a higher standard of material and or workmanship than those required by any of the above mentions regulations and specifications then the specification here under shall take precedence over the said regulations and standards. In case of discrepancy/ambiguity in the specifications the specifications given herewith will prevail.

5. GUARANTEE

1. The contractor shall guarantee all the materials and equipments supplied by him, against any defective design in the manufacturing and/or workmanship.

2. The lumens output and life of lamps shall be covered by the guarantee.
3. The warranty/guarantee shall start from the date of acceptance of the installation and taking over by the department as indicated in payment terms laid down in these tender papers or GCC and shall be valid for a period of 60 months. The security deposit will be refund only after completion of warranty/ guarantee and CAMC period.

6. DRAWINGS

The successful tenderer shall furnish, within one week of award of work, the following drawings:
i) Lighting layout and cabling layout.
ii) Foundation drawing for high mast.
iii) Any other drawings considered necessary by tenderer or by the Engineer In charge

7. Performance Guarantee and Security deposit

PBG shall be released after completion of free warranty period of 24 months. PBG shall be valid for additional two months after completion of free warranty period of 24 months.

Security deposit shall be released after completion of free warranty and CAMC period of 5 years (i.e 2+3 years)

8. Lux level

The LED should have minimum lumen level of 20 lux in the ground and upto a radius of 60 Mtrs from centre of High Mast Pole. Successful bidder has to provide Lux level test report for all 15 nos High mast light having comparison as per design and as actual Lux level on field.

9. Project Maintenance factor for Lux level should be 0.85.

10. Successful bidder has to provide LM-79 & LM-80 report for LED fitting for approval and prior installation.

11. LED light fixture manufacturer should have NABL test facility for LED fixtures.

12. Pre-Bid Queries:- Pre-bid queries can be submitted through online means(e-mail) upto 5PM only on the day of pre-bid meeting i.e 05.08.2024. Thereafter no queries will be entertained. However bidders can participate in pre-bid meeting on 05.08.2024 at 3:00 PM in the office of Executive Engineer at AIIMS Deoghar.

TECHNICAL SPECIFICATION FOR HIGH MAST FEEDER PILLAR

The work shall be carried out as per CPWD / BIS Specification and relevant IS codes. In case of discrepancy between technical specification and BOQ, the BOQ prevails.
SCOPE : The specification covers the general requirement for **Providing High Mast Flood Lighting :**

Outdoor Feeder pillar Box as per OEM/ High mast /LED fixture company standard with grey enamel paint with reserve forward Switch should have following minimum items (As per drawing by OEM of High mast)

FEEDER PILLAR BOX SIZE :- minimum 450X200
SLAG TYPE 4 WAY TERMINAL- 63A (I/P)
Minimum 40A FP MCB
Minimum 32A TP CONTRACTOR
TOGGLESWITCH
TIMER (ANALOGUE)
INDICATION LED LAMP (R,Y,B)
63ASLAGTYPE4WAYTERMINAL(O/P)
10 SP MCB
OVER LOAD RELAY 2/3.5A
CONTACTOR 9A
MOTOR TERMINAL 32A
PUSH SWITCH TERMINAL (STD)
PENDENT SWITCH WITH SELECTOR FOR R/F
MOTOR OPERATION
RCBO 300 MA 4 pole 63 A

.

Note :- Item mentioned above may increase including their ratings and quantity as per recommendation of OEM, design of OEM or as per requirement from Engineer-in-Charge. These additional items in High Mast feeder pillar and Main Feeder pillar shall be provided by the Contractor at quoted rates. No additional payment shall be made for additional items. Rates should be quoted accordingly.

POLES AND HIGH MASTS SPECIFICATIONS

1. SCOPE

The scope of this specification covers the manufacture, transport, installation, testing and commissioning of the complete lighting system, using Raising and Lowering type of High mast Towers, including the Civil Foundation Works. The purchaser will provide the feeder cable of required size up to the base compartment of the high mast.

2. APPLICABLE STANDARDS:

a) PLG 07 High Masts for Lighting and CCTV
b) SANS 10225 High Mast natural frequency calculation
c) IS 875 Part – 3 Wind Loading
d) IS 2062/ BS EN 10025 Hot Rolled Steel plates
e) BS EN ISO 1461 Galvanization
f) IS 2266 Stainless steel Wire rope
g) IS 9968 Part – 1 Trailing Cable
h) IS 694 PVC insulated flexible copper cable
i) IS 7098 Part-1 XLPE insulated Aluminium / Copper cable
j) IS 12615 Motor
k) EN-8 grade, IS 1367 (Part 3) Foundation Bolt
l) AWS Welding

3. HIGHMAST:

3.1 Structure

The High mast shall be of continuously tapered, polygonal cross section, 12 / 20 sided, presenting a good and pleasing appearance and shall be based on proven In-Tension design conforming to the standards referred to above to give an assured performance and reliable service. The dimensions of the mast and other details are as per the enclosed data sheet.

3.2 Construction

The mast shaft shall be manufactured from Hot Rolled steel plates confirming to IS 2062/ BS EN 10025. Each mast shaft section shall be without any circumferential weld joint except base flange. The mast base flange shall be free from any lamination or incursion and provided with supplementary gussets between the bolt-holes to ensure elimination of helical stress concentration.

The minimum A/F dimension of top shall be 100 mm / 150 mm and bottom as per the design and data sheet enclosed. The minimum section length except for the top section shall be 10 m and top shall depend on the length required to make the specified height. The masts sections shall be joined at site by slip-stress-fit method and minimum overlap distance shall be 1.5 times the diameter at penetration. A door reinforced with welded steel section, vandal resistant, weather proof with Allen bolts and pad locking facility of dimension not less than 1050 mm x 225 mm shall be provided at a height 2 times the width of door from the base of mast to provide clear access to base compartment equipment's winch, motor, cable, connector etc; For the environmental protection of the mast, the entire fabricated mast shall be hot dip galvanized internally and externally in single dip having the galvanization thicknesses as per galvanization standard BSEN ISO1461

3.2.1 Dynamic Loading for the Mast

The mast structure shall be suitable to sustain an assumed maximum reaction arising from a wind speed as per IS 875 part-3-2015 (three second gust) and shall be measured at a height of 10 meters above ground level. The design life of the mast shall be 25 years, Topography factor K3 shall be 1 (Flat terrain) and Importance factor K4 shall be 1 (case 3).The force co-

efficient taken for design of the twenty-sided polygonal structure is to be established from the wind tunnel test data.

3.4 Luminaries Carriage

Hot dip galvanized Luminaries carriage designed to install luminaries as specified in data sheet or as per illumination design and junction box. The same is to be fabricated from ERW tubes in two halves and flanges joined at site with stainless steel bolts and nyloc nuts. Holes are to be provided in the bottom side of tubes to act as conduit for wiring cable. PVC lining is to be provided in the inner side of carriage to avoid metal contact with mast surface. Weather-proof junction box shall be provided on the Carriage Assembly for terminating the trailing cable and power cable to luminaries.

3.5 Raising and lowering mechanism:

3.5.1 Winch

The double drum winch shall be completely self-sustaining without the need for brake shoe, springs or clutches and self-lubricating type by means of an oil bath. The worm gear ratio shall not be less than 53:1 and safe working load shall be as per data sheet. The drums are to be grooved to provide perfect seat for stable and tidy rope lay and arrangement for distortion free rope end termination. The winch shall have provision to operate manually by a handle or electrically through power tool. The capacity, operating speed, safe working load, recommended lubrication and serial number of the winch shall be marked on each winch. The winch shall be type tested through reputed institutions like IIT as consultants and the type test report shall be submitted along with offer. A test certificate is to be submitted along with supplies.

3.5.2 Head Frame The hot dip galvanized head frame is to be designed as a capping unit of the mast is of welded steel construction and provided with guides and separators between the ropes and cable. The LM6 Aluminium pulleys with bush mounted through stainless steel shaft shall be suitable to accommodate wire ropes and multi core trailing cable. The head frame shall be provided with guides and stops with PVC buffer for the docking of luminaires carriage. The pulley assembly shall be covered by a hot dip galvanized canopy.

3.5.3 Stainless Steel Wire Ropes

The stainless-steel wire ropes shall be in 7/19 construction with central core in the same material of grade, diameter and breaking load as given in data sheet. The end construction of rope for the winch drum shall be fitted with talurit and for two continuous ropes the end termination in luminary's carriage shall be with stainless steel thimble and copper splicing and for others with stainless steel thimble and bulldog grips.

3.6 Electrical System, Cable and Cable Connections

The multi core trailing cable from base compartment to junction box at luminaires carriage shall be 1.1 KV grade and type as specified in the data sheet of copper conductor with male female connectors of shall be as given in data sheet. Wiring from junction box to luminaries is to be done using 3 core 1.5 sq. mm PVC/ XLPE insulated, PVC sheathed, copper conductor flexible cable. Suitable arrangement is to be provided in the base compartment to receive and terminate incoming power cable and MCB in a box for isolation of incoming power supply shall be provided by purchaser.

3.7 Power Tool for the Winch

Three phase, single speed, 6 pole high-powered motor of rating suitable to lift the load mounted on adjustable plate to adjust the length of winch motor coupling chain is to be provided in base compartment. Mechanical torque limiter is to be mounted on motor shaft to stop transmission of motion from motor to winch in case of excess load and thus prevent the damage to winch and breakage of rope.

3.8 Lightning Finial

One number heavy duty 1.2 m long hot dip galvanized lightening finial shall be provided for each mast for mast height ≥16M on the head frame to get a direct conducting path to the earth through the mast.

3.9 Aviation Obstruction Lights

One/Two number Low intensity RED colored LED Aviation Obstruction Lights shall be provided on luminaires carriage as per customer requirement.

3.10 Earthing Terminals

Earth terminal using 12 mm diameter hot dip galvanized bolts shall be provided on the door stiffener of the mast for lightning and electrical earthing of the mast.

3.11 Feeder Pillar

Each mast shall be provided with a feeder pillar housing Suitable TPN MCB incomer, single dial time switch and outgoing contactor for automatic switching on and off luminaries, 9A two contactors and raise lower push buttons for motor operation, incoming terminals of35/ 50 sq. mm and outgoing terminals of 16 sq. mm for power cable and 2.5 sq. mm for motor.

3.12 Incoming Power Cable

1.1 KV grade, XLPE insulated, PVC sheathed, Aluminium conductor, armored cable for power supply of suitable size and capacity shall be provided from feeder pillar to the base compartment of the high mast. Cable shall be taken to the base compartment of the high mast through the provision made in the foundation. Power cable of suitable size up to the feeder pillar from supply point shall be provided by purchaser

4.0 Detail specifications of Galvanized Octagonal poles

The Octagonal Poles shall be designed to withstand the maximum wind speed as per IS 875 Part3-2015. The head loading i.e. windage area and the weight of fixtures are to be considered to calculate maximum deflection of the pole and the same shall meet the requirement of BSEN 403-1 & 3. The pole shaft shall be made from hot rolled steel plate confirming to IS 2062/ BS EN 10025. All octagonal pole shafts shall be provided with the rigid base plate manufactured from MS steel confirming to IS: 2062 of suitable thickness with provision for fixing foundation bolts. The pole shaft shall have octagonal cross section and shall be continuously tapered with single longitudinal welding. There shall not be any circumferential welding. The welding of pole shaft shall be done by Submerged Arc Welding (SAW) process. The base plate shall be fillet welded to the pole shaft at two locations i.e. from inside and outside. The octagonal Poles shall have door of approximate 500 mm height at the elevation of 500 mm from the base plate. The pole shall be adequately strengthened at the location of the door to compensate for the loss in section. The hinged door shall be flush with the exterior surface and shall have suitable locking arrangement. There shall also be suitable arrangement for the purpose of earthing. The welding shall be carried out confirming to approved procedures qualified by third party inspection agency. The welders shall also be qualified for welding the octagonal shafts. The Octagonal Poles shall be in single section up to 12-meter height and there shall not be any circumferential weld join except at base flange. The Manufacturing unit shall have in house galvanizing facility; the poles shall be hot dip galvanized as per BSEN ISO 1461 standard. Zinc used for galvanizing shall have purity of 99.995% as per IS 209. The galvanizing shall be done in single dipping. The galvanized mounting bracket shall be supplied along with the Octagonal Poles for installation of the luminaries. Provision should be provided in the bottom compartment to mount PVC /Bakelite sheet along with connectors for cable looping and single pole MCB to isolate individual luminaire.

LIST OF APPROVED MATERIALS/VENDORS (CIVIL/ELECTRICAL)

Note :

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

	MATERIAL/ITEM	BRAND/MAKE/VENDOR
1	AAC Block	Aerocon, Siporex, Ultratech, Ecolite, Concrelite, J.K. Laxmi (Cement Ltd.), BILTECH, Kansal, Dlite Blocks
2	AAC Block Adhesive	Ferrous crete(Ferro-1188), ARDEX ENDURA (White Star), Ultratech (Fixed-Block)
3	Acrylic Distemper, Emulsion, Synthetic Enamel Paint and Primer.	Asian Paints, ICI Dulux, Berger, Nerolac
4	Epoxy Adhesive	FOSROC, Aquomix , Choksey, BAL-ENDURA,MYK Laticrete
5	Aluminium Composite Panel	Alpolic, Aluco Bond, Reynobond, Euro bond, Alstrong
6	Aluminium Extrusions	Hindalco, Indalco, Jindal
7	Aluminum Sections	Jindal, Hindalco, Indalco
8	Annealed Float Glass	Saint Gobain, Modi Guard, Asahi
9	Bitumen	Indian Oil, Hindustan Petroleum, Bharat Petroleum
10	Calcium Silicate Board / Tiles	Aerolite, Hilux, Starpan
11	CC Pavers / Grass Pavers	Nitco, Hindustan, Ultra, KJS Concrete, Duracrete, Mehtab Tiles, Kaptim
12	Centrifugally Cast Iron Pipe & Fittings	NECO, SKF, BIC, RIF, KAPILANSH, HIF
13	Ceramic Tiles	Kajaria, Nitco, Orient Bell, Johnson, RAK Ceramics
14	Chequered / Tactile Tiles	Dura, Eurocon, Modern, Hindistan, Johnson, Eavison
15	CI Manhole Cover	BIC, SKF, NICO, Hepco, Kapilansh, RIF
16	CI Double flanged non-return valves	Kirloskar, Sant, Kartar
17	CP fittings	Jaquar, Marc, Kohler, Grohe
18	CPVC Pipes & Fittings	Astral Flowguard, Ashirvad, Prince, Supreme, Finolex,VECTUS
19	Curtain Carrier / Drapery Rod	Marvel, Vista levlor, Johnson.
20	Dash fastener, Expansion Bolt	Hilti, Bosch Fischer
21	Hydraulic Door closer, Floor springs	Dorma, Hettich, Hafele, Geze
22	Ductile Iron Pipe (Water Supply)	Electro steel, Kesso, KDUPL, Electro Spun
23	EPDM Gasket	Hanu, Anand, Lescuyer
24	GRC / Tactile Tile	Unistone, Eurocon, Dazzle
25	Epoxy Grouting Compound	Pidilite, Ferrous Crete(Ferro-102), MYK LATICRETE, Fosrock
26	Epoxy Primer & Paints	Berger, Pidilite, CICO, BASF, SIKA, Fosrock
27	Fire Check door	Navair, Godrej, Shakti
28	Float Glass Mirror	Modifloat, Saint Gobain, Asahi
29	Flush Doors (ISI Mark only)	Century, Kitlam, Archid, Greenply, Marino, Duro, Gujcon
30	Friction Stay	Earl-Bihari, Geze, Hettich, Securistyle
31	Galvanized/Stainless Steel Anchor Fasteners	Shakti, Arrow, Hilti, Fischer
32	GI Pipe & fittings	Tata, Zenith, Jindal, Prakash Surya, Swastik; (ISI Marked only)
33	GI Sheet	Sail, TATA, Jindal or equivalent
34	Gun Metal Gate Valve	Zoloto, Leader, SANT, Prima
35	Glass Mosaic Tile	Bisazza, Italia, Palladio, Mridul
36	Gypsum Board (False Ceiling)	Boral Gypsum, India Gypsum, St. Gobain
37	Hardener	Hardcrete of Snowcem India, Pidilite, CICO.
38	HDPE Pipes	VECTUS, Emco, Polyfins, Pioneer, Plyfab
39	Jet Assembly for EWC/Health Faucet	Parryware , Jaquar, Marc, PRIMA(ISI)
40	Kitchen loft tank	Sintex, Tirupati Structurals Ltd, KMS Plast world P.Ltd. Planet Plastics, Sri Kamakshi Traders, Sreyah Novel InC.
41	Laminate and Veneers	Merino, Greenlam, Kitlam, Duro
42	Locks / Latch	Godrej, Harrision, Dorma, Doorset (ISI)
43	Marine Plywood / BWP Ply	Duro, Century, Greenlam
44	Melamine Polish	Asian Paints, Pidilite, ICI Dulux, Burger

45	Metal False Ceiling	Nitobond, Armstrong, Trac, Durlum, Lafarge, Anutone
46	Mineral Fibre/ GRG Ceiling	Armstrong, Daiken, Anutone, Diamond, Credence
47	M.S. Pipe (Railing)	Jindal, Tata, RINL, Prakash Surya
48	M.S. Tubes	Tata, Apolo, Prakash Surya
49	Multicoat Synthetic Plaster/ Textured Exterior wall paint	Spectrum, Heritage, Ultratech
50	Plywood, Block Board, wooden panel	Greenply, Century, Duro, Armstrong, saint gobbin, usg boral, gyptech
51	Polycarbonate Sheet	Danpalon (DPI), Bayer, Macrolux
52	Polysulphide / Silicon Sealent	Pidilite, Fosroc, Tuffseal, Chouksey Chemicals, Perma, BASF
53	POP (Plaster of paris)	JK, Laxmi, Sriram Nirman, Sakarni
54	PPR Pipes	SFMC, SAFE, Poineer Industries
55	Precast CC interlocking Tiles	Hindustan, Paver India, KK
56	Precoatd Profile Sheet	Tata, Bhushan or equivalent
57	Pre-laminated Particle Board	Ecoboard, Action-Tesa, Duro, Century Ply, Greenlam, Albihari
58	Pressed steel door frame	M/s Engineers & Fabricator, Raipur, M/s J.K. Enternprises, Jaipur, M/s Jangid Engineering Works, Jaipur, M/s Swastik Super Industries, Mohali, M/s SKS Steel Industries, New Delhi.
59	PTMT Fittings	Prayag, Polytuf, Pearl, Millennium, PRIMA
60	PVC Cistern	Steelbird, Jindal, Seabird, Prayag, Commander
61	PVC Connection Pipe	Supreme, Prince, Finolex
62	PVC Rain Water Pipe & Fitting	Finolax, Kisan, Kasta, Supreme, Astral, Prince
63	Ready Mix Concrete (RMC)	Lafarge, Alchon, ACC, L&T, Grasim, Ultratech, RMC India
64	Ready Mix plaster	Ultratech, Precisecon Chem, Perma, Ferrous Crete, JK, Fosrock,
65	PVC Shutter	Polygreen, Rajshri, Plastogreen, Sintex
66	PVC Water storage Tank (Only ISI)	VECTUS, Water well, Plasto, Polycon, Sintex. (Weight as per ISI)
67	Sluice Valve	Kirloskar, Venus, Kalpana, SANT, KARTAR, Zolto
68	Solid PVC frames and shutters	Polygreen, Rajshri, Plastogreen, Sintex
69	Stainless Steel	Jindal, Salem or equivalent
70	Stainless steel Sink with or without Draining board.	Nirali, Hindware, Frankee, Neelkanth, Jaquar
71	Stainless steel Door/Window fittings & Fixtures	Dorma, Ozone, D-Line, Hettich, Kich, Geze
72	Structural steel section	TATA, SAIL, RINL, Jindal
73	Super plasticizer / admixture	Sika, Fosroc, Chouksey Chemicals, BASF
74	Tensile Fabric	Bluestone, Encon, Structure Flex
75	Tile Adhesive	Ferrous Crete(Ferro-1122), Ardex Endura (Gold Star), PIDILITE (Fevimate XL), WEABR(Saint-Gobin) Sika, Thermoshield, Somany
76	Towel Ring/Towel Rod/Towel Rack	Marc, Jaquar, Kolher, Grohe
77	Tubular steel Window, ventilator, Door frame	M/s Engineers & Fabricator, Raipur, M/s J.K. Enterprises, Jaipur, M/s Swastik Super Industries, Mohali (Punjab) M/s Jangid Engg. Jaipur
78	UPVC Pipes & Fittings	Astral Flowguard, Ashirvad, Prince, Supreme, Finolex,VECTUS
79	Urinal, Washbasin, Orrisa Pattern W.C., Wall mounted European W.C.Seat with Cistern	Hindware, Parryware, Jaquar, Cera, Kolher, Grohe
80	Vitrified Tile	Johnson -Marbonite, Somany, Kajaria, Orient Bell, NITCO, RAK
81	Wall Putty	JK, BIRLA, SARAPUTTY
82	Waste Pipe	Kamal, Viking, Jaquar
83	Water Proofing Compound (Liquid)	Pidilite, Cico, Impermo
84	White Cement	JK White, Birla White, Grasim
85	Vinyl flooring	Armstrong, Gerfloor, Tarkett
86	Variable Frequency Drive	ABB / Siemens / Fuji / Danfoss
87	AHU/ TFA	Citizen / Zeco / VTS / Flaktwood / Systemair / Edgetech
88	Plug Fan	Nicotra Gebhardt / Kruger/ Ziehl-abegg /Greenheck / Flaktwood
89	Motor (IE-3) for AHU Fan	ABB / Siemens / Crompton
90	Filters	Thermadyne / Freudenberg / Camfil Farr / AAF
91	VRV /VRF System	DAIKIN / CARRIER/ TOSHIBA/ MITSUBISHI / HITACHI / OGENERAL
92	Refrigerant Copper Piping	Maxflo / Rajko / Modern
93	GSS/GI Sheet	SAIL / Jindal / TATA
94	Grilles / dampers / diffusers / Louvers / VCD / Fire damper / MotorisedDamper	Ruskin/ Caryaire / Systemair / Cynore / Dynamic Equipments / Airflow / Pineair
95	Fire Damper Actuator	Belimo / Siemens / Honeywell
96	Nitrile Insulation	Armacell / Aflex / Supreme
97	Magnehelic gauge	Dwyer or equivalent
98	Duct Heater	Daspass / KEPL / Equivalent
99	Electrical Panels / Switch gears / Switch Socket / DB	L&T/ ABB/ Schneider/ Siemens/ Legrand/ Tricolite/ Adlec Mundka/ Advance / CWS Electrotech / Application control /

		Neptune. (CPRI approved)
100	LED Light Fixture	Bajaj/Philips/Wipro/Crompton/ Havells
101	Current Transformer	AE/Pragati/Gilbert & Maxwell/Matrix/Rishabh/Kappa
102	Electronic Digital Meter	Enercon System Pvt. Ltd. / CG Schlumberger / L&T / Rishabh
103	Moulded Case Circuit Breaker (MCCB)	Schneider (NSX) / L&T (D Sine) / Siemens (3VL) / ABB (Tmax) / Legrand
104	Miniature Circuit Breakers (MCB).	Schneider / L&T / Siemens / ABB / Legrand/Havells
105	Residual Current Circuit Breaker (RCCB)	Schneider / L&T / Siemens / ABB / Legrand/ Havells
106	Power/Aux. Contactor	Schneider / L&T / Siemens / ABB / Legrand/ Havells
107	Change Over Switch	Schneider / L&T / Siemens / ABB / Legrand/ Havells
108	Meters including Digital Meters	L&T/ Socomec/ Schneider/ Secure/ Siemens/ ABB / Rishabh
109	Protection Relay	Areva/Siemens/L&T/Schneider
110	Indication lamp and push button	GE/L&T/Siemens/Schneider
111	Selector Switch	Siemens/ L&T/ Schneider/ABB
112	Single Phase Preventer	L&T/Minilec/Schneider/ABB
113	LT Cables / Wire	Havells/ Finolex/ KEI/ Polycab/ RRKabel/Grandlay
114	Bimetallic Cable Lug	Dowell/Comet/Jainson
115	Cable Glands Double Compression.	Dowell/Comet/Jainson
116	DLP PVC Trunking	Legrand/ Havells and equivalent.
117	Toughened glass	Float Glass India Ltd/Modiguard/Saint Gobain
118	Glass wool	UP Twiga, LLOYD INDIA LTD, ROCKWOOLINDIA
119	LED Flood Light	Bajaj/Philips/Wipro/Crompton/ Havells / Orient / Syska
120	High Mast Pole	Bajaj / Valmont/Transrail/ Philips/Wipro/Crompton
121	MCCB	Schneider / L&T / ABB / C& S Electric
122	Relays	AVK-SEGC / ABB / L&T /Schneider / C& S Electric
123	Power contactors	L&T / ABB / SCHNEIDER / C& S Electric
124	Instrument transformers	Kappa / Kalpa / Instrans /Voltamp
125	Meters	Trinity Energy / L&T/ AE/Elmeasure
126	MCB / MCB DB	Legrand / Schneider / C& S Electric / L&T / ABB
127	ELCB / ELMCB / RCBO	Legrand / Schneider / Havells / L&T / ABB
128	LT Cable	Poly Cab / Havells /KEI / Rallison
129	End Termination Materials	Dowels / SMI / Wago
130	MS Powder coated Cable Tray	As per panel fabricator
131	PVC Wires& Flexible Cables (FRLS)	Poly Cab / Havells /KEI / RR Kabel
132	Industrial sockets	Legrand / L&T / ABB
133	Glands - Single / Double Compression	Dowells / Comet / Jainson
134	Aluminium / Copper Lugs	Dowells / Comet / Jainson
135	Aviation Light	Bajaj / eq.
136	Surge Arrestors	L&T / ABB / OBO Betterman

NOTE: If any of the above approved vendors' materials are unavailable or if alternative makes of materials are proposed to be used, the same must be approved by the engineer-in charge prior to supply and installation. The sample material/ item with respective catalogues/ brochures/ technical specifications and prices with discounts should be submitted well in time for approval.

Schedule of Quantities

S.No.	Description of items				
	High Mast	**Unit**	**Quantity**	**Rate**	**Amount**
1	Fabrication, Supply, Erection, Testing and Commissioning of minimum 20 Mtr High Mast with minimum top dia 150mm, minimum Bottom dia 410 mm, minimum Base Plate 610 mm & minimum PCD 460mm, Polygonal, Tapered, Flange mounted type, Totally Hot Dip Galvanized, hot dip galvanized both internally and externally average coating of galvanization 65 micron and suitable for wind velocity as per IS 875 Part 3. The mast shaft shall be in Two sections with no circumferential weld and shall be stress fitted at site. Supply and installation of accessories for 20 Mtr High Mast which includes head frame(Latching Head frame system), raising lowering system, lighting arrestor, steel wire rope, double drum winch, power trailing cable, interconnections /connections, lugs, cable , Integral power tool, suitable size anchor plate, junction box, templates etc , It also includes wiring and cabling of suitable cross section copper conductor from high mast feeder pillar to junction box and junction box to LED fixtures (12 nos) (Cable , wiring , connections and any other required accessories shall be as per recommendation of OEM / OEM design). It shall also include accessories for High Mast like head frame steel wire rope 6 mm dia (7/19 construction) trailing double drum winch hot dip galvanize lantern carriage arrangement suitable for minimum 12 nos. luminaries arrangement symmetrically reversibly type 3 ph single speed motor of 1 HP or more with mechanical tripping facility & GI lighting finial on the head frame separate handle for manual operation of winch with torque limiting device for safe locking of carriage flexible minimum 2.5 sq mm EPR cable for connection hinged service door of size not less than (1200x 250 mm) in base section, base plate earthing terminal. The mast shall have an integral motorize power tool system installed inside the base compartment for its operation. High mast system shall be complete as required	Set	15	To be filled in CPP Portal BOQ	To be filled in CPP Portal BOQ
	Foundation bolts				

2	Supply and fixing of foundation bolts manufactured from special steel along with nuts, washers, anchor plate and common template. Foundation bolts for base flange thickness not less than 25 mm, minimum number of bolts 10 nos. M 30 dia x 850 length (PCD 490) and suitable size anchor plate of minimum thickness 8 mm or more and also as per the recommendation of OEM, OEM design and approved by Engineer In charge	Set	15	To be filled in CPP Portal BOQ	To be filled in CPP Portal BOQ
	LED fixture				
3	Supply installation testing and commissioning of integral LED Flood light Luminaries for 20 mtr high mast shaft having wattage as per design requirement (300 watt Minimum) with >_ **120** lumens per watt, color temp. 5700K +_ 300 K or other color temp to be approved by engineer in charge. luminaries maintenance **L80** at 50,000 hours, **Project Maintenance factor for Lux level should be 0.85** , voltage **120v**-270 volts, 50 c/s LED driver efficiency >_ 90% PF >_ 0.95 surge protection > 10 KA THD < 10%, IP 66 IK(8-10)pressure die-cast aluminum housing with fins for better heat dissipation and heat resistant & toughened glass cover with high power LEDs with secondary lenses for wide angle distribution etc. complete as required. Including wiring of luminaries with all wiring materials like PVC insulated PVC sheathed flexible cable of suitable copper conductor cores. Sample of LED fixture will be approved by Engineer-in-charge prior procurement & installation.	Nos.	180	To be filled in CPP Portal BOQ	To be filled in CPP Portal BOQ
	Aviation light			To be filled in CPP Portal BOQ	To be filled in CPP Portal BOQ
4	Supplying and Installation of double dome integral LED aviation obstruction light of Aviation including wiring , conduit ,accessories, glands, lugs etc complete as required.	Nos.	15	To be filled in CPP Portal BOQ	To be filled in CPP Portal BOQ
5	Supply and laying G.I. pipe (medium class) in pole collar/ foundation	Metre	45	To be filled in CPP Portal BOQ	To be filled in CPP Portal BOQ
	Foundation				

6	Designing and casting suitable size RCC foundation M25 grade for High mast as per manufacturers drawing adopting safe bearing capacity of soil (considering the safe soil bearing capacity at site as minimum 10 T/sqmtr at 2 metre depth from NGL) at site including provision of 70 mm dia pipe for cable running. Foundation, design and drawing shall be as per OEM recommendation. Construction of foundation is including Excavation for foundation in soft soil, Ready mixed or site batched design mix cement concrete for reinforced cement concrete work, Centering and shuttering including strutting, propping etc. and removal of from for Foundations, footings, bases of columns, etc. for mass concrete, Cement concrete, Plastering work, Steel reinforcement for R.C.C.work with Thermo-Mechanically Treated bars of grade Fe-500Dor more , Dressing work at plinth level with all materials and labour	Job	15	To be filled in CPP Portal BOQ	To be filled in CPP Portal BOQ
7	Demolishing cement concrete road manually or by mechanically means for laying of cable including disposal of material with in 300 mtr. lead as per direction of engineer in charge and making the cutting/ demolishing good as it was before.	Mtr	100	To be filled in CPP Portal BOQ	To be filled in CPP Portal BOQ
	LT cables				
8	Supply of following size Aluminum conductor XLPE insulated sheathed armoured cable of 1.1KV grade conforming to IS:1554				
8.1	3.5 x 120 sq mm	Mtr	950	To be filled in CPP Portal BOQ	To be filled in CPP Portal BOQ
8.2	3.5x 95 sq mm	Mtr	850	To be filled in CPP Portal BOQ	To be filled in CPP Portal BOQ
8.3	3.5x35 sq mm	Mtr	2800	To be filled in CPP Portal BOQ	To be filled in CPP Portal BOQ
9	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size in the existing DWC HDPE pipe as required				
9.1	**upto 35 sq mm**	Mtr	2800	To be filled in CPP Portal BOQ	To be filled in CPP Portal BOQ
9.2	**Above 35 sq mm and upto 95 sq mm**	Mtr	850	To be filled in CPP Portal BOQ	To be filled in CPP Portal BOQ
9.3	**above 95 mm & upto 185 sq mm**	Mtr	950	To be filled in CPP	To be filled in

				Portal BOQ	CPP Portal BOQ
10	Supply & Laying of follwoing size Double walled corrugated (DWC)HDPE pipe ISI marked along with all accessories like socket , bend, coupler etc conforming to IS 14930, Part II complete with fitting and cutting, jointing etc direct in ground (75 cm below ground level) including excavation and refilling the trench complete as required including the cost of labour and material required to complete the job in all respect up to the entire satisfaction of Engineer in charge of the work.				
10.1	63 mm dia (OD- 63 mm & ID- 51 mm nominal)	Mtr	3650	To be filled in CPP Portal BOQ	To be filled in CPP Portal BOQ
10.2	90 mm dia (OD- 90 mm & ID- 76 mm nominal)	Mtr	950	To be filled in CPP Portal BOQ	To be filled in CPP Portal BOQ
	High Mast Feeder Pillar				
11	Supply and fixing of High Mast Feeder Pillar weather proof , out door type : IP 66 Each mast shall be provided with a feeder pillar fabricated out of 14 SWG CRCA sheet mounted on angle frame 750 mm long in CC foundation having 2 nos earth strips and finished with two coats of red oxide primer and powder coated paint of approved shade. The feeder pillar shall comprise of incoming TPN MCB of suitable current rating, incoming / outgoing terminals and control for the power motor. Feeder pillar shall be mounted near to the mast. Suitable digital timer of reputed make, with necessary contactors, with interlocking facility for motor operation and necessary push button, wiring etc. For ON/OFF automatic / manual and photovoltaic cell/ automatic timer with all accessories for control of the lamps should be provided and connected in the circuit. Feeder pillar shall include incomer, contactor for the automatic switching of luminaries, power tool control with 2 no. suitable rating contactors and raise lower push button, Incoming minimum 35 sq. mm and out going minimum 16 & 2.5 sq. mm terminals. Feeder pillar should be provided with suitable number of holes, cable glands including termination of incoming and outgoing cables,/wires. Feeder pillar should include the minimum items as mentioned in technical specifications. Additional items in feeder pillar can also be included as per recommendation and design of OEM at the quoted rates. Rating & Capacity of all accessories/switchgears should be as per High Mast manufacture recommendations /OEM	Nos	15	To be filled in CPP Portal BOQ	To be filled in CPP Portal BOQ

	recommendation and OEM design)				
	Main Feeder panel				
12	Supply, installation, commissioning and testing of feeder pillar/LT panel board Kiosk type ,LT (415 Volts, 50 Hz , 3-phase, 4 wire system) floor mounted , factory assembled, outdoor type weather and vermin proof made out of 2.00 mm thick CRCA sheet with both side open able and front hinged opening on 40x40x6 mm angle iron frame, rubber lining/neoprene gasket, locking arrangement, handles painted externally and internally with two coats of synthetic enamel powder coated paint as approved shades First Quality) over a coat of red oxide primer complete comprising of following :- Cable entry (Incoming & out going) – from bottom with cable glands and Aluminum busbar with insulating heat shrinkable sleeve rating 200 amps - 4 strip				
12.1	**Incoming** – MCCB 125 Amps FP 25 KA, 415 Volts, 50Hz- 1 No **Outgoing** - (a) 63 Amps MCCB FP 16 KA 415 Volts 50Hz - 04 Nos (b) 32 Amps MCB TPN 10 KA, 415 Volts, 50Hz - 02Nos (c) 16 Amps MCB DP 10 KA, 240 Volts, 50Hz - 02 Nos (d) Digital voltmeter (size- 96x96 mm) 0-500 volts with selector switch - 01 No (e) Digital type ammeter (size - 96x96 mm) with selector switch including CT 3X (125/5 amp) with all connection - 1 No (f) LED Indicating lamp RYB - 01 Set (MCCB shall be with thermal magnetic release, O/L, S/C protection with Neutral Link) Note :- This item includes foundation/ platform for Main Feeder panels. (i) Excavation & earth work required for taking out cable of any length & re-laying cable all terminal/bare conductor duly insulated of existing cable with heat shrinkable sleeve 1.1 KV grade. (ii) Platform for the feeder pillar board with PCC 1:3:6 15 Cm thick in foundation, Brick (Sub Class B) in CM 1:6 ,rendering 1:6 on exposed surfaces and 100 mm thick PCC 1:3:6 type C1 using 20 mm graded stone aggregate as in padding on top and grouting blots etc for panel including all civil works (Feeder Pillar foundation) like excavation, PCC, bricks work, plastering, refilling, providing PVC sleeves in foundation etc . The platform shall be of 300 mm height above ground level and of adequate size leaving minimum 600 mm all around the feeder pillar board for movements.(iii) The LT feeder pillar shall be made to accommodate the following switch gear MCCBs.	Nos	5	To be filled in CPP Portal BOQ	To be filled in CPP Portal BOQ

	Make for MCCB's ABB/Schneider /SIEMENS /Legrand iv) Feeder panel should be provided with suitable number of holes, cable glands including termination of incoming and outgoing cables,/wires				
	Earthing				
13	Earthing with GI earth pipe 4.5 metre long , 40 mm dia including accessories and providing masonry enclosure with cover plate having locking arrangement and watering pipe etc with charcoal/ coke and salt as required	Each	40	To be filled in CPP Portal BOQ	To be filled in CPP Portal BOQ
14	Providing and fixing 25mm x 5mm GI strip from earth electrode to feeder pillar/ high mast including connection with GI nut, bolt, spring, washer, holes as required	Mtr	244	To be filled in CPP Portal BOQ	To be filled in CPP Portal BOQ
15	Providing and fixing 6 SWG dia GI wire on surface or in recess for loop earthing as required.	Mtr	330	To be filled in CPP Portal BOQ	To be filled in CPP Portal BOQ
	CAMC				
16	CAMC of entire high mast system (15 nos) including panels , switchgears , LED fixtures , High mast , Power tools , motor, consumables/ non consumable items and all items mentioned above. (System will be under free warranty period of 2 years from date of handing over of 15 nos high mast system in working condition to the AIIMS Deoghar) CAMC covers replacement of faulty / defective parts during entire CAMC(3yrs) and free warranty covers replacement of faulty / defective parts during period of free warranty of 2 years				
16.1	CAMC for 3rd year after expiry of 2 year free warranty period	Job	1	To be filled in CPP Portal BOQ	To be filled in CPP Portal BOQ
16.2	CAMC for 4th year	Job	1	To be filled in CPP Portal BOQ	To be filled in CPP Portal BOQ
16.3	CAMC for 5th year	Job	1	To be filled in CPP Portal BOQ	To be filled in CPP Portal BOQ
	TOTAL (Including GST)				

Note:

1. **All rate to be inclusive cost of Transportation, Labour, Materials etc. as required for satisfactory completion of work.**
2. **All the materials should be approved by the Engineer-Incharge before start of work.**
3. **Five years Warranty only applicable on Mast & LED Lights, 2 year warranty on Panel, cables and other items**

4	**All electrical connections including termination of cables along with required size and quantity of lugs , joints , cable glands etc and wires in High Mast Feeder pillar, Main Feeder pillar, LT panels shall be in scope of contractor. No additional payments will be made for material and making connections.**

Map showing tentative location of 15 nos High masts . Bidders are requested to visit site before quoting the rates.