

All India Institute of Medical Sciences

Veerbhadra Marg, Pashulok,

Rishikesh-249203



Tender document for Supply , Installation , Testing and Commissioning of Fire Alarm System & CO sensors in Guest House at AIIMS Rishikesh.

Ref. No.	:	47/01/FAS/2019/RIS/ES-584
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Technical Bid Opening	:	19-02-2019 at 3.00 PM

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Name of Work: - Supply , Installation , Testing and Commissioning of Fire Alarm System & CO sensors in Guest House at AIIMS Rishikesh

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Certified that this bid document contains pages 1 to 43 (One to Fourty three page).

Superintending Engineer
AIIMS, Rishikesh

**Tender document may be downloaded from CPPP site <https://eprocure.gov.in>
NIT may be downloaded from institute's website www.aiimsrishikesh.edu.in**

AIIMS, Rishikesh**NOTICE INVITING TENDER**

The Superintending Engineer, AIIMS Rishikesh on behalf of Director, AIIMS Rishikesh invites Item rate e-tenders from approved and eligible Original equipment manufacturer or their authorized dealers for the following work:-

NIT No. : **47/01/FAS/2019/RIS/ES-584**

Name of Work: Supply, Installation, Testing and Commissioning of Fire Alarm System & CO sensors in Guest House at AIIMS Rishikesh.

Estimated Cost: **Rs. 2235216.00** Earnest money: **Rs. 45000.00** & period of completion: **45 Days**

Last date & time of submission of bids: 18-02-2020 upto 1500 hours

The tender forms and other details can be seen and downloaded from the website www.aiimsrishikesh.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 Superintending Engineer, AIIMS Rishikesh on behalf of Director, AIIMS Rishikesh invites Item rate e-tenders from approved and eligible Original equipment manufacturer or their authorized dealers or agencies having similar work experience of Supply , Installation , Testing and Commissioning of Fire Alarm System 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 technical bid
Supply , Installation , Testing and Commissioning of Fire Alarm System & CO sensors in Guest House at AIIMS Rishikesh.	Rs. 22,35,216.00	Rs. 45000.00	45 days	18-02-2020 upto 1500 Hrs	19-02-2020 at 1500 Hrs

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.aiimsrishikesh.edu.in or <https://eprocure.gov.in>
4. But the bid can only be submitted after depositing tender fee in favour of AIIMS Rishikesh and uploading the mandatory scanned documents such as Demand draft or pay order or banker's cheque or deposit at call receipt or fixed deposit receipts and bank guarantee of any scheduled bank towards EMD in favour of AIIMS Rishikesh and other documents as specified.
5. Those contractors not registered on the website mentioned above, are requested to get registered beforehand.
6. The intending bidder must have valid class-III digital signature to submit the bid.
7. On opening date, the contractor can login and see the bid opening process. After opening of bids he will receive the competitor bid sheets.
8. Contractor should upload documents in the form of PDF format only and hard copy of all the documents should be submitted in tender office before the last date of submission of Bid.
9. Contractor must ensure to quote rate of each item. In addition to this, while selecting any of the cells a warning appears that if any cell is left blank the same shall be treated as "0". Therefore, if any cell is left blank and no rate is quoted by the bidder, rate of such items shall be treated as "0" (Zero).
10. The contractor should quote the rate of item including GST as per statutory rules.

11. (i) The bidder shall pay the respective amount of Bid Security (EMD) as mentioned in table by Demand Draft FD/TD/CD in favour of “ AIIMS, Rishikesh” drawn on any Nationalized Bank/ Scheduled Bank and payable at Rishikesh and must be valid for (6) six month. Bids received without Earnest Money deposit (EMD) shall stand rejected and thus shall not be considered for evaluation etc at any stage. The original EMD will be submitted alongwith bid documents.

(ii) Earnest Money deposited with AIIMS, Rishikesh in connection with any other tender enquiry even if for same/similar material / Stores by the tenderer will not be considered against this tender.

(iii) The EMD will be forfeited if the bidder withdraws or amends its tender or impairs or derogates from the tender in any respect within the period of validity of its tender or if it comes to the notice that the information/ documents furnished in its tender is incorrect or false.

12. The bid security (EMD) without interest shall be returned to the unsuccessful bidders after finalization of contract with successful bidder.

13. The successful bidders has to execute a contract on Indian non judicial stamp paper of Rs.100/- (Rupees one hundred only) within fifteen (15) days from the date of award of this tender in his favour and also required to furnish the security deposit @ 5% against performance guarantee of contract value in the form of FD/BG/TD/CD from any Nationalized/Schedule bank duly pledged in favour of AIIMS, Rishikesh & payable at Rishikesh only. The EMD deposited by successful bidder may be adjusted towards Security Deposit as demanded above. If the successful bidder fails to furnish the full security deposit or difference amount between Security Deposit and EMD within 15 (fifteen) days after the issue of Letter of Award of Work, his bid security (EMD) shall be forfeited and award of tender in suppliers favour automatically stands terminated at his cost & liability, unless time extension has been granted by AIIMS, Rishikesh.

14. The bid shall be valid and open for acceptance by the competent authority of AIIMS Rishikesh for a period of 60 (sixty) days from the published date of opening of the tenders and no request for any variation in quoted rates and / withdrawal of tender on any ground by bidders shall be entertained. The unilateral withdraw at any stage will cause forfeiture of EMD in addition to any remedy that the purchaser may have under the law. 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, **then the Government shall, without prejudice to any other right or remedy, be at liberty to forfeit 50% of the said earnest money as aforesaid. Further the bidders shall not be allowed to participate in the re-bidding process of the work.**

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

I. Treasury Challan /Demand draft/Pay order or Banker’s Cheque/ Deposit at call Receipt/FDR/Bank guarantee of any scheduled bank against EMD and tender fee.

II. Enlistment/ Authorization Order of the Contractor.

III. Certificate of Registration for GST/ Sales Tax / VAT and acknowledgement of up to date filed return.

IV. Certificate of work experience (As specified in Clause 1.2.1 of CPWD-6)

V OEM or their authorized firms duly authorized by not less than Director level can only quote /Participate the tenders with declaration by the OEM for maintaining quality covering guarantee/ warrantee clause as per the norms by the OEM itself for this tender.

Note: In case the contractor not uploads the above documents in para 15 will be treated as disqualified.

16. The hard copies of documents uploaded by contractors should also be submitted in the office of engineering department before the last date/due time of submission of tender. Those who fail to submit hard copies are treated as disqualified for the further process of tendering

CPWD - 6

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

Item rate tenders are invited on behalf of Director, AIIMS Rishikesh from approved and eligible contractors of CPWD, MES, and Railways & Govt. Departments of uttarakhand state for the work of “Supply , Installation , Testing and Commissioning of Fire Alarm System & CO sensors in Guest House at AIIMS Rishikesh. The enlistment of the contractors should be valid on the last date of submission of bids. In case the last date of submission of bid is extended, the enlistment of contractor should be valid on the original date of submission of bids.

- 1.1 The work is estimated to Cost **Rs. 22,35,216.00**, 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

Three similar works each of value not less than **Rs. 894086.00** or two similar work each of value not less than **Rs.1341129.00** or one similar work of value not less than **Rs. 1788172.00** in last **7 years** ending last day of the month previous to the one in which the tenders are invited.

Similar works means SITC of Fire Alarm system

The value of executed works shall be brought to current costing level by enhancing the actual value of work at simple rate of 7% per annum; calculated from the date of completion to last date of receipt of tenders.

2. Agreement shall be drawn with the successful bidders on prescribed Form No. CPWD 8 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 60 (Sixty) 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.
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.aiimsrishikesh.edu.in or <https://eprocure.gov.in> . The cost of tender is Rs.1180 (inclusive GST). Those who download the tender document from website should upload scan copy of DD/Pay Order for Rs.1180.00 (non – refundable) in favour of “AIIMS, Rishikesh”, payable at Rishikesh.

The required EMD shall be uploaded with the required documents otherwise tender submitted may stand rejected.

6. After submission of the bid the contractor can re-submit revised bid any number of times but before last time and date of submission of bid as notified.
7. While submitting the revised bid, contractor can revise the rate of one or more item(s) any number of time (he need not re-enter rate of all the items) but before last time and date of submission of bid as notified.
8. The contractor whose bid is accepted will be required to furnish performance guarantee of 5% (Five Percent) of the bid amount within the period specified in Schedule F. This guarantee shall be in the form of cash (in case guarantee amount is less than Rs. 10000/-) or Deposit at Call receipt of any scheduled bank/Banker's cheque of any scheduled bank/Demand Draft of any scheduled bank/Pay order of any Scheduled Bank (in case guarantee amount is less than Rs. 1,00,000/-) or Government Securities or Fixed Deposit Receipts or Guarantee Bonds of any Scheduled Bank or the State Bank of India in accordance with the prescribed form. In case the contractor fails to deposit the said performance guarantee within the period as indicated in Schedule 'F' including the extended period if any, the Earnest Money deposited by the contractor shall be forfeited automatically without any notice to the contractor. **The Earnest Money deposited along with tender shall be returned after receiving the aforesaid performance guarantee.**

9.

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

Copy of Enlistment Order and certificate of work experience and other documents as specified in the press notice shall be scanned and uploaded to the e-tendering website within the period of bid submission. However, certified copy of all the scanned and uploaded documents as specified in press notice shall have to be submitted by the lowest bidder only within a week physically in the office of tender opening authority.

Online bid documents submitted by intending bidders shall be opened only of those bidders, whose original EMD deposited and other documents scanned and uploaded are found in order.

10. The Bid submitted shall become invalid and e-Tender Processing Fee shall not be refunded if:
 - (i) The bidders is found ineligible.
 - (ii) The bidder does not deposit original EMD with Superintending Engineer, AIIMS Rishikesh (The EMD document shall only be issued from the place in which the office of receiving division office is situated).
 - (iii) The bidders does not upload all the documents (including service tax registration/ VAT registration/ Sales Tax registration) as stipulated in the bid document including the copy of receipt for deposition of original EMD.
 - (iv) If any discrepancy is noticed between the documents as uploaded at the time of submission of bid and hard copies as submitted physically by the lowest bidder in the office of tender opening authority.
10. 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.

- 11 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.
- 12 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.
- 13 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.
- 14 The contractor shall not be permitted to tender for works in AIIMS Rishikesh in which his near relative is posted as Divisional Accountant or as an officer in any capacity between the grades of Superintending Engineer, Executive Engineer and Junior Engineer (both inclusive). He shall also intimate the names of persons who are working with him in any capacity or are subsequently employed by him and who are near relatives to any gazetted officer in AIIMS Rishikesh. Any breach of this condition by the contractor would render him liable to reject his Bid submitted by him.
15. No Engineer of Gazetted rank or other Gazetted Officer employed in Engineering or Administrative duties in an Engineering Department of the Government of India is allowed to work as a contractor for a period of one year after his retirement from Government service, without the previous permission of the Government of India in writing. This contract is liable to be cancelled if either the contractor or any of his employees is found any time to be such a person who had not obtained the permission of the Government of India as aforesaid before submission of the tender or engagement in the contractor's service.
17. The bid for the works shall remain open for acceptance for a period of 60 days from the date of opening of bids/60 days from the date of opening of financial bid.. If any bidders withdraws his bid before the said period or issue of letter of acceptance, whichever is earlier, or makes any modifications in the terms and conditions of the bid which are not acceptable to the department, then the Government shall, without prejudice to any other right or remedy, be at liberty to forfeit 50% of the said earnest money as aforesaid. Further the bidders shall not be allowed to participate in the rebidding process of the work.
16. 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 8 or other Standard C.P.W.D. Form as applicable.

INTEGRITY PACT

To,
.....
.....
.....

Sub: **47/01/FAS/2019/RIS/ES-584:-** Supply , Installation , Testing and Commissioning of Fire Alarm System & CO sensors in Guest House at AIIMS Rishikesh
Dear Sir,

It is here by declared that AIIMS Rishikesh 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 Rishikesh.

Yours faithfully,
Superintending Engineer
AIIMS Rishikesh

To,

The Superintending Engineer,
AIIMS Rishikesh,

Sub: Supply , Installation , Testing and Commissioning of Fire Alarm System & CO sensors in Guest House at AIIMS Rishikesh.

Dear Sir,

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

Yours faithfully

(Duly authorized signatory of the Bidder)

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

INTEGRITY AGREEMENT

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

BETWEEN

AIIMS Rishikesh represented through Director.....
(Name of Division)

AIIMS Rishikesh....., (Hereinafter referred as the
(Address)

'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

WHEREAS the Principal /Owner has floated the Tender (NIT No.
.....) (hereinafter referred to as “Tender/Bid”) and intends to award, under laid down organizational procedure, contract for

(Name of work)

Hereinafter referred to as the “Contract”.

AND WHEREAS the Principal / Owner values full compliance with all relevant laws of the land, rules, regulations, economic use of resources and of fairness/transparency in its relation with its Bidder(s) and Contractor(s).

AND WHEREAS to meet the purpose aforesaid both the parties have agreed to enter into this Integrity Agreement (hereinafter referred to as “Integrity Pact” or “Pact”), the terms and conditions of which shall also be read as integral part and parcel of the Tender/Bid documents and Contract between the parties.

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

Article 1: Commitment of the Principal / Owner

- 1) The Principal/Owner commits itself to take all measures necessary to prevent corruption and to observe the following principles:
 - (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 Coercion or Collusion** of which it has knowledge or becomes aware, during the tendering process and throughout the negotiation or award of a contract.
- 2) The Bidder(s) / Contractor(s) 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) / Contractor(s) will not use improperly, (for the purpose of competition or personal gain), or pass on to others, any information or documents provided by the Principal/Owner as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.
- 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 participate in a tender on behalf of one manufacturer, he shall not be allowed to quote on behalf of another manufacturer along with the first manufacturer in a subsequent/parallel tender for the same item.
- d) 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 offences outlined above or be an accessory to such offences.
- 4) The Bidder(s)/ Contractor(s) will not, directly or through any other person or firm indulge in fraudulent 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) **Forfeiture of EMD/Performance Guarantee/Security Deposit:**

If the Principal/Owner has disqualified the Bidder(s) from the Tender process prior to the award of the Contract or terminated/determined the Contract or has accrued the right to terminate/determine the Contract according to Article 3(1), the Principal/Owner apart from exercising any legal rights that may have accrued to the Principal/Owner, may in its considered opinion forfeit the entire amount of Earnest Money Deposit, Performance Guarantee and Security Deposit of the Bidder / Contractor.

- 3) **Criminal Liability:**

If the Principal/Owner obtains knowledge of conduct 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, Director, AIIMS Rishikesh.

Article 7- Other Provisions

- 1) This Pact is subject to Indian Law, place of performance and jurisdiction is Rishikesh .
- 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- 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)

**Superintending Engineer
AIIMS , Rishikesh,
Virbhadra Road,
Rishikesh-249203**

(For and on behalf of Bidder/Contractor)

WITNESSES:

1. (Signature, name and address)

2. (Signature, name and address)

Place: -

Dated: -

निविदा TENDER

मैंने/हमने कार्य के लिए निविदा आमंत्रण सूचना, अनुसूची क,ख,ग,घ, ङ, और च, लागू विनिर्देश, नक्शे एवं डिजाइन, सामान्य नियम एवं निर्देश, ठेके के उपबंध, विषिष्ट शर्तों, दर अनुसूची एवं अन्य कागजात तथा ठेके की शर्तों में दिए गए नियम तथा निविदा कागजात में उल्लिखित अन्य बातों को पढ़ व जांच लिया है।

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.

मैं/हम, एतद्वारा अनुसूची 'च' में विनिर्दिष्ट समय के भीतर विनिर्दिष्ट कार्य, यथा-मात्राओं की अनुसूची तथा सभी संबंधित विनिर्देशों, डिजाइनों, नक्शों के अनुरूप तथा सामान्य नियमावली के नियम-1 और ठेके की शर्तों के खंड-11 में उल्लिखित लिखित अनुदेशों एवं ऐसी सामग्रियों, जो प्रदान की जाती है और उसके संबंध में, ऐसी शर्तें जो लागू हों, के अनुरूप निष्पादन हेतु निविदा देता हूँ/देते हैं।

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 Ninety (90) days from the due date of opening of financial bid and not to make any modification in its terms and conditions.

₹ 45000.00 की धनराशि, धरोहर राशि के रूप में ट्रेजरी चालान रसीद/अनुसूचित बैंक की मांग जमा रसीद/ अनुसूचित बैंक की सावधी जमा रसीद /अनुसूचित बैंक का डिमांड ड्राफ्ट/ अनुसूचित बैंक द्वारा जारी बैंक गारंटी के रूप में इसके साथ भेजी जा रही है। यदि मैं / हम निर्धारित निष्पादन गारंटी को निर्धारित समय अवधि में प्रस्तुत करने में असफल रहते हैं तो मैं/ हम यह मंजूर करते हैं कि एम्स ऋषिकेश के निदेशक या उनके कार्यालय के उत्तराधिकारी किसी अन्य अधिकार या उपचारी उपाय पर प्रतिकूल प्रभाव डाले बिना उक्त धरोहर राशि जब्त करने के लिए पूर्णतया स्वतंत्र होंगे। इसके अलावा, यदि मैं/हम विनिर्दिष्ट कार्य प्रारंभ करने में असफल रहते हैं तो मैं/ हम यह मंजूर करते हैं कि एम्स ऋषिकेश के निदेशक या उनके कार्यालय के उत्तराधिकारी कानून में उपलब्ध किसी अन्य अधिकार या उपचारी उपाय पर प्रतिकूल प्रभाव डाले बिना उक्त धरोहर राशि, तथा निष्पादन गारंटी जब्त करने के लिए पूर्णतया स्वतंत्र होंगे अन्यथा उक्त धरोहर राशि निविदा कागजात के अनुसार उसमें निहित शर्तों व निबंधनों के अनुसार कार्यों के निष्पादन एवं आदिष्ट विचलनों को अनुसूची 'च' में वर्णित प्रतिषत से अनधिक व निविदा प्रपत्र के खण्डों 12.2 व 12.3 में निहित प्रावधानों के अनुसार निष्चित की जाने वाली दरों पर उस सीमा से अधिक के विचलनों के करने के लिए उनके द्वारा प्रतिभूति-निपेक्ष के रूप में रोक ली जाएगी। इसके अतिरिक्त मैं/हम सहमत हैं कि बयाना राशि या बयाना राशि तथा उपर्युक्त निष्पादन गारंटी जब्त हो जाने के मामले में मुझे/हमें कार्य की पुनः निविदा प्रक्रिया में भाग लेने से रोक दिया जाएगा।

A sum of ₹ 45000.00 is hereby forwarded in Multiple Treasury Challan or Demand Draft or Pay order or Banker's Cheque or Deposit at Call Receipt / Fixed Deposit receipts of a scheduled bank / demand draft of a scheduled bank/bank guarantee issued by a scheduled bank as earnest money. If I/We fail to furnish the prescribed performance guarantee within prescribed period, I/we agree that the said Director of AIIMS Rishikesh or his successors in office shall without prejudice to any other right or remedy, be at liberty to forfeit the said earnest money absolutely. Further, if I/We fail to commence work as specified, I/We agree that Director of AIIMS Rishikesh or his successors in office shall without prejudice to any other right or remedy available in law, be at liberty to forfeit the said earnest money and the performance guarantee absolutely. The said Performance Guarantee shall be guarantee to execute all the works referred to in the tender documents upon the terms and conditions contained or referred to those in excess of that limit at the rates to be determined in accordance with the provision contained in Clause 12.2 and 12.3 of the tender form. **Further, I/we agree that in case of forfeiture of earnest money or both earnest money and performance guarantee as aforesaid, I/We shall be debarred for participation in the re-tendering process of the work.**

I/We undertake and confirm that eligible similar work(s) has / have not been got executed through another contractor on back to back basis. Further that, if such violation comes to the notice of AIIMS Rishikesh, then I/We shall be debarred for tendering in AIIMS Rishikesh 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 एतद्द्वारा घोषणा करते हैं कि मैं/हम निविदा कागजातों, नक्शों और कार्य से संबंधित अन्य अभिलेखों को गुप्त/गोपनीय कागजात के रूप में रखेंगे और उनसे प्राप्त/ली गई जानकारी किसी अन्य को, जिन्हें मैं/हम सूचित करने के लिए प्राधिकृत हों, से भिन्न किसी को, नहीं बताएंगे या जानकारी को किसी ऐसे रूप में प्रयोग नहीं 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 Director, AIIMS Rishikesh for a sum of ₹. _____

(Rupees _____)

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

- a)
- b)
- c)

For & on behalf of Director, AIIMS Rishikesh

Signature.....

तारीख Dated

Designation.....

अनुसूचियां **SCHEDULES**
[FOR MAJOR (ELECTRICAL) COMPONENT]

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

Schedule of quantities (Enclosed)

Page No. -

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

अनुसूची 'ग' **SCHEDULE 'C'**

ठेकेदार को भाड़े पर दिए जाने वाले औजार एवं संयंत्र

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. Addl. Specifications attached.

अनुसूची (ङ) **SCHEDULE 'E'**

ठेके की सामान्य शर्तों का संदर्भ

General conditions of contract for CPWD works

1. Reference to General Conditions of contract

2016 as amended upto date.

Name of work: Supply , Installation , Testing and Commissioning of Fire Alarm System & CO sensors in Guest House at AIIMS Rishikesh

कार्य की अनुमानित लागत Estimated cost of work

: ₹ **2235216.00**

(i) धरोहर राशि Earnest money

: ₹ 45000.00

(ii) निष्पादन गारंटी Performance guarantee :

5% of tendered value. निविदित मूल्य का 5 प्रतिषत

(iii) प्रतिभूति निक्षेप: Security Deposit:

2.5% of tendered value plus 50% of performance guarantee for contract, involving maintenance of the building and services / other work after construction of same building and services / other work.

अनुसूची 'च' SCHEDULE 'F'

सामान्य नियम एवं दिशानिर्देश:

General Rules & Directions:

निविदा आमंत्रण करने वाला प्राधिकारी

Officer inviting tender -

कार्य की मर्दों की मात्रा के लिए अधिकतम प्रतिषत जिससे अधिक निष्पादित मर्दों के लिए दरों का निर्धारण खण्ड 12.2 और 12.3 के अनुसार होगा

Maximum percentage for quantity of items of work to be executed beyond which rates are to be determined in accordance with Clauses 12.2 & 12.3.

SE, AIIMS Rishikesh

निम्नानुसार

see below

Definitions:

2(v) भारसाधक इंजीनियर

Engineer-in-Charge

SE, AIIMS Rishikesh

2(viii) स्वीकार कर्ता प्राधिकारी

Accepting Authority

Director , AIIMS Rishikesh

2(x) अतिरिक्त और लाभों को पूरा करने के

लिए श्रम एवं सामग्रियों की लागत पर प्रतिषतता

Percentage on cost of materials and

labour to cover all overheads and profits.

15% (Fifteen per cent)

2(xi) Standard Schedule of Rates:

S.R.(Int., Ext.) with upto date correction slips & market rates

2(xii) Department:

AIIMS Rishikesh

9(ii) Standard CPWD contract Form:

GCC 2010, CPWD form 8 as modified & corrected up to date (Whether correction vide latest circulars are incorporated or not in this document).

9(ii) मानक के.लो.नि.वि. टेका फार्म
modified

CPWD form 8 (Print edition -2016) as

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 : 15 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	: 7 days
खण्ड Clause 2	खण्ड 2 के तहत प्रतिकार निश्चित करने वाला प्राधिकारी Authority for fixing compensation under clause 2	Director , AIIMS Rishikesh
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	15 days.
लक्ष्य	नीचे दी गई सारणी के अनुसार	
	<u>Milestone(s): -</u>	NA
	कार्य निष्पादित करने के लिए अनुमत्य समय Time allowed for execution of work	60 Days
	Authority to decide (i) Extension of Time (ii) Rescheduling of mile stones	SE, AIIMS Rishikesh SE, AIIMS Rishikesh.
	(iii) Shifting of date of start in case of delay in handing over of site	SE, AIIMS Rishikesh
खण्ड Clause 6, 6A	खंड लागू-(6 या 6 क) Clause applicable	Clause 6
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	NA
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	No

खण्ड Clause 10C

Component of labour expressed as
Percent of value of work

NA**खण्ड Clause 10CC - NOT APPLICABLE.**

<p>खण्ड 10 गग उन सविदाओं पर लागू होगा जिसमें कार्य समापन की अवधि, अगले कालम में दर्शाई गई अवधि से अधिक अनुबंधित है।</p> <p>Clause 10CC to be applicable in case of work with stipulated period of compensation exceeding the period shown in next column : Months</p>	<div style="border: 1px solid black; padding: 5px; display: inline-block;">DELETE</div>
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खण्ड Clause 11

कार्य निष्पादन के लिए अनुपालन

Specifications to be followed for execution of work

General specifications for electrical works with up to date correction slips (Hereinafter called CPWD specifications also)

खण्ड Clause 12

Type of Work		Original Work
12.2 & 12.3	विचलन सीमा जिसके परे खण्ड 12.2 तथा 12.3 कार्य के लिए लागू होंगे Deviation limit beyond which clauses 12.2 & 12.3 shall apply for work	30%
12.5	(i) Deviation limit beyond which clauses 12.2 & 12.3 shall apply for foundation work (except earth work)	NA

खण्ड Clause 16

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

SE, AIIMS Rishikesh or successor thereof**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 Redressal Committee (DRC)	Competent Authority to appoint DRC and Arbitrator
DRC shall constitute one Chairman and two members	Director, AIIMS Rishikesh

Clause 36(i) Requirement of Technical Representative(s) and Recovery Rate

Sl. No.	Minimum Qualification of Technical Representative	Discipline	Designation (Principal Technical/Technical representative)	Minimum experience	number	Rate at which recovery shall be made from the contractor in the event of not fulfilling provision of Clause 36(i) Per person	
						Figures (` Per person)	Words (` Per person)
1	i)Diploma/ Graduate Engineer	E & M	Principal Technical Representative	5/2 years	1 No	35000/50 ,000/- p/m	Thirtyfive thousand/Fifty Thousand

Assistant Engineers retired from Government services that are holding Diploma will be treated at par with Graduate Engineers. Even if contractor (or partner in case of firm/company) is himself an Engineer/Overseer(s), it is necessary on part of contractor to employ Engineer(s) and/or/Overseer for the supervision of the work(s) as per stipulation.

खण्ड Clause 42

- I) क) सीमेन्ट और बिटुमन की अनुमानमूल मात्रा निर्धारित करने के लिए अनुसूची/विवरण
- II) (a) Schedule/statement for determining theoretical quantity of cement & bitumen NA
- II) अनुमानमूलक मात्राओं में अनुमत्य विचलन Variations permissible on theoretical quantities. NA
- d½) सीमेन्ट जिन कार्यों के लिए निविदा में अनुमानित मूल्य रु. 5 लाख से अधिक न हो
- a) Cement for works with estimated cost put to tender not more than Rs. 5 lakhs जिन् कार्यों के लिए निविदामें अनुमानित मूल्य रु. 5 लाख से अधिक हो NA
- for works with estimated cost put to tender more than Rs. 5 lakhs NA
- ख) बिटुमन सभी कार्यों के लिए
- b) Bitumen for all works NA
- ग) इस्पात प्रत्येक व्यास, कोट और श्रेणी के लिए पूर्णवर्लन और संरचनात्मक इस्पात काट
- c) Steel Reinforcement and structural steel sections for each diameter, section and category. NA
- घ) सभी अन्य सामग्रियां
- d) All other materials NA

AMENDMENTS TO GENERAL CONDITIONS OF CONTRACT 2014

OM No. DG/CON/282 Dated 10-12-2014

**Sub: Modification in the 5th Paragraph of clause-25(ii) of GCC 2014
The following 5th Paragraph of clause-25(ii) of GCC 2014 is modified as under**

<u>EXISTING Provision</u>	<u>Modified Provision</u>
<p>Clause 25 (ii) 5th Paragraph The arbitration shall be conducted in accordance with the provisions of the Arbitration and Conciliation Act- 1996 (26 of 1996) or any statutory modification or re-enactment thereof and the rules made thereunder and for the time being in force shall apply to the arbitration proceeding under this clause.</p>	<p>Clause 25 (ii) 5th Paragraph The arbitration shall be conducted in the accordance with the provisions of the Arbitration and Conciliation Act- 1996 (26 of 1996) /The Jammu & Kashmir Arbitration and Conciliation Act, 1997(35 of 1997) (as the case may be) or any statutory modification or re-enactment thereof and the rules made thereunder and for the time being in force shall apply to the arbitration proceeding under this clause</p>

OM No DG/SE/CM/CON/283 Dated 05-05-20158

Sujb- Payment of wages to the labour by Contractor

The Following provision of CPWD contractor labour Regulation of GCC2014 are amended

<i>Existing Provision</i>	<i>Modified Provision</i>
<p>C.P.W.D. Contractor's Labour Regulations 5. Payment of Wages vi) Wages due to every worker shall be paid to him direct or to other person authorized by him in this behalf. vii) All wages shall be paid in current coin or currency or in both. x) It shall be the duty of the contractor to ensure the disbursement of wages in the presence of the Junior Engineer or any other authorized representative of the Engineer-in-Charge who will be required to be present at the place and time of disbursement of wages by the contractor to workmen. xi) The contractor shall obtain from the Junior Engineer or any other authorized representative of the Engineer-in-Charge as the case may be, a certificate under his signature at the end of the entries in the "Register of Wages" or the "Wage cum-Muster Roll" as the case may be in the following form :- "Certified that the amount shown in column Nohas been paid to the workman concerned in my presence</p>	<p>C.P.W.D. Contractor's Labour Regulations 5. Payment of Wages vi) Wages due to every worker shall be paid to him direct by contractor through Bank or ECS or online transfer to his bank account. vii) All wages shall be paid through Bank or ECS or online transfer. x) It shall be the duty of the contractor to ensure the disbursement of wages through bank account of labour. xi) The contractor shall obtain from the Junior Engineer or any other authorized representative of the Engineer-in-Charge as the case may be, a certificate under his signature at the end of the entries in the "Register of Wages" or the "Wage cum-Muster Roll" as the case may be in the following form:- "Certified that the amount shown in column Nohas been paid to the workman concerned through bank account of labour onat"</p>

OM No DG/CON/285 Dated 05-06-2015

**Sub: Amendment in general conditions of contractor (GCC)-2014
The following provision of GCC 2014 is modified as under**

<p>Clause 5.1 As soon as possible after the Contact is concluded, the contractor shall submit a time and progress chart for each mile stone and get it approved by the Department. The Chart shall be prepared in direct relation to the time stated in the Contract document for completion of items of the works. It shall indicate the forecast of the dates of commencement and completion of various trades of section of the work and may be amended as necessary by agreement between the Engineer-in-Charge and the Contractor within the limitations of time imposed in the Contract documents, and further to ensure good progress during the execution of the work, the contractor shall in all cases in which the time allowed for any work, exceeds one month (save for special jobs for which a separate programme has been agreed upon) complete the work as per mile stones given in Schedule 'F'</p> <p>Clause 5.1</p>	<p>Clause 5.1 The contractor shall submit a programme Chart (Time and Progress) for each mile stone alongwith performanceguarantee and get it approved by the Department. The Chart shallbe prepared in direct relation to the time stated in the Contract document for completion of items of the works. It shall indicate theforecast of the dates of commencement and completion of various trades of sections of the work and may be amended as necessaryby agreement between the Engineer-in-Charge and the Contractor within the limitations of time imposed in the Contract documents,and further to ensure good progress during the execution of the work, the contractor shall in all cases in which the time allowed forany work, exceeds one month (save for special jobs for which a separate programme has been agreed upon) complete the work asper mile stones given in Schedule 'F'</p>
<p><u>Cluae 7A</u> <u>No Provision</u></p>	<p>Clause 7A No Running Account Bill shall be paid for the work till the applicable labour licenses, registration with EPFO, ESIC and BOCW Welfare Board, whatever applicable are submitted by the Contractor to the Engineer-in-Charge.</p>
<p>Clause 19 The Contractor shall obtain a valid license under the Contract Labour (R&A) Act, 1970 and the Contract Labour (Regulation and Abolition) Central Rules, 1971 before the commencement of the work, and continue to have a valid license until the completion of the work</p>	<p>Clause 19 The Contractor shall obtain a valid license under the Contract Labour (R&A) Act, 1970 and the Contract Labour (Regulation and Abolition) Central Rules, 1971 before the commencement of the work, and continue to have a valid license until the completion of the work. The contractor shall also comply with provisions of the Inter –State Migrant Workmen (Regulation of Employment and Conditions of Service) Act, 1979.</p>

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 (AIIMS Rishikesh) in the sum of Rs. (Rs. in words) for which payment well and truly to be made to the said AIIMS Rishikesh 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 Engineer-in-Charge either up to the above amount or part thereof upon receipt of first written demand, without the Engineer-in-Charge having to substantiate his demand, provided that in his demand the Engineer-in-Charge will note that the amount claimed by him 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.

TREMS AND CONDITIONS

1. The work shall be carried out strictly in accordance with CPWD specifications for electrical works Part-I Internal 2013 and 1995 (external) as amended upto date and in accordance with Indian Electricity Rules, 1956, Indian Electricity Act, 1910 as amended upto date and as per instructions of the Engineer-in-Charge including as below and nothing will be paid extra.

2. All materials to be used on this work by the contractor shall be got approved from the Engineer-in-Charge and deptt. Has right to inspect the material at manufacturers' place before installation at site.
3. The work shall be carried out according to approved drawings/details which shall be subsequently issued to the successful for execution of work and as per instructions of the Engineer-in-Charge who will have the right to change the layout as per requirement at site and the contractor shall not have any claim due to change in layout.
4. All damages done to the building, roads, pathways, floors, walls during execution of electrical work shall be the responsibility of the contractor and the same will be made good immediately at his own cost to the satisfaction of the Engineer-in-Charge. Any expenditure incurred by the department in this condition shall be recovered from the contractor and decision of the Engineer-in-Charge about recovery shall be final.
5. The bad workmanship will not be accepted and defects shall be rectified at contractor's cost to the satisfaction of the Engineer-in-Charge. The programme of electrical works are to be co-ordinated in accordance with the building work and no claim for idle labour will stipulated in the tender, electrical work shall have to be completed within 30 days of the completion of civil work.
6. All the debris of the electrical works should be removed and the site should be cleared by the contractor immediately after the accruing of debris. Similarly any rejected material should be immediately cleared off from the site by the contractor.
7. Issue of material to the contractor wherever stipulated, shall be according to the requirement at site from time to time depending upon the progress of work.
8. Cement for this bonafied work is to be arranged and used by the contractor himself and nothing extra will be paid on this account.
9. The contractor or his representative is bound to sign the site order book as and when required by the Engineer-in-Charge and to comply with the remarks therein.
10. The size of conduit and wiring shall be got approved from the Engineer-in-Charge before taking upto the execution.
11. The contractor shall make his own arrangement at his own cost for electrical/general tools and plants required for the work
12. Main board and main distribution board: The work shall be carried out according to the drawings/details as approved by the Engineer-in-Charge. The contractor shall have to get the samples approved before the whole lot is brought to site and it shall include all inter connections etc.
13. No Central/State sales tax/VAT/Contract tax/Excise duty etc. shall be separately paid by the department. The rates tendered should be inclusive all taxes and duties (exclusive of service tax) Deduction of contract tax at source shall be made while releasing payment through running/final bills as applicable . A certificate specifying the rate and amount of deduction shall however be issued. No Form-D, 31/32 (Road permit) shall be issued by the department. The road permit shall be arranged by the tenderer on his own.
14. The entire installation shall be at the risk and responsibility of the contractor until these are tested and handed over to the department. However if there is any delay in construction from the department side, the installation may be taken over in parts, but the decision on the same shall rest with Engineer-in-Charge which shall be binding on the contractor.
15. Not withstanding the schedule of quantities, all items of interrelated works considered necessary to make the installation complete and operative are deemed to be included shall be provided by the contractor at no extra cost.

16. The connection, inter connection, earthing and inter earthing shall be done by the contractor wherever required and nothing extra shall be paid on this account.
17. Some of the items of work, if already executed: on that case the successful tenderer shall have to use these items for completing the work. For wiring, the existing conduit wherever required shall be used by the contractor. The recovery will be made for these items as accepted rate of other agencies.
18. Nothing extra shall be paid for :-
(a) Inter connections with thimbles/wires/tapes strips etc.
- 19 The design parameter will have to restore, if there is any deviation in efficiency or design parameter will be intimated initially. Party has to provide Electrical/Mechanical Drawing if any change has to require for making full functional.
- 20 All system must have third party certification of the product if required
- 21 All necessary work required to make full functional will be taken up the successful bidder .
- 22 It is a SITC type job hence contractor is advised to inspect the site carefully before quoting the rates. The contractor shall be deemed to have satisfied himself to the nature & extent of work at site & no claim for extra payment/or time extension will be allowed on the ground that he was not conversant with condition providing at the site. The rate shall be inclusive of all taxes, accessories, machining & labor, dismantling i.e. site clearance & shifting the debris from work place to specified place at site etc. The Spare list given above is tentative hence contractor may provide a comprehensive list which is suppose to be require to make full functional facility.
- 23 . All tools and tackles required for overhauling will be arranged by the party
- 24 **Guarantee Period:-The contractor will be responsible for malfunctioning of Material/spares supplied by him, it might be due to poor workmanship or due to spare supplied by him, for a period of three year from the date of satisfactory completing the job. He has to rectify the fault arises due to above at own cost.**
- 25 **Any civil, electrical minor modifications or new constructions shall be in scope of successful bidder. No extra cost shall be payable for these modification works.**

Superintending Engineer ,
AIIMS Rishikesh

TECHNICAL SPECIFICATIONS

1. All hardware items such as screws, thimbles, G.I. wires etc. which are essentially required for completing an item as per specifications will be deemed to be included in the item even when the same have not been specifically mentioned.
2. All hardware materials such as nuts/bolts/screws/washers etc. to be used in the work shall be zinc/cadmium plated iron.

3. Any conduit which is not be wired by the contractor shall be provided with GI fish wire for wiring by some other agency subsequently. Nothing extra shall be paid for the same.
4. While laying conduit, suitable junction boxes shall be left for pulling the wires.
5. 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.
6. 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.
7. 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.
8. 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.
9. Where switches/sockets/telephone outlets are to be provided, the same shall be of only one make.
10. 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 pre-wired 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.
11. The earthing shall be carried out in the presence of the Engineer-in-Charge or his authorized representative.
12. All fittings/fans will be earthed as per specifications.

Superintending Engineer
AIIMS Rishikesh

TECHNICAL SPECIFICATIONS

INTELLIGENT ANALOGUE ADDRESSABLE FIRE ALARM & DETECTION SYSTEM

F.1.0 SYSTEM SPECIFICFTIONS:

F.1.1 DESCRIPTION:

- a. This section of the specifications includes the furnishing, installation, and connection of the microprocessor controlled, intelligent reporting fire alarm equipment required to form a complete coordinated system ready for operation. It shall include, but not be limited to, alarm initiating devices,

alarm notification appliances, control panels, auxiliary control devices, annunciators, power supplies, and wiring as shown on the drawings and specified herein.

- b. The fire alarm system shall comply with requirements of NFPA Standard No. 72 / EN 54 Part 2 & 4 for protected premises signaling systems except as modified and supplemented by this specification. The system shall be electrically supervised and monitor the integrity of all conductors.
- c. The fire alarm manufacturer shall be of the highest caliber and quality. The system shall be manufactured by an ISO 9001 certified company and meet the requirements of BS5750: Part 1: ANSI/ASQC Q91-1987.

F.1.2 SCOPE OF WORK:

A. The scope of work covers installation, commissioning and testing of a new intelligent reporting microprocessor controlled fire detection system in accordance with the specifications and drawings.

The work shall cover:

- Fire Alarm Control Panel (FACP) with 640 Character display
- 40 Character display repeater panels/ Display mimic panels
- Addressable Alarm initiating devices.
- Circuit interface modules
- Hooters / Strobes/sounders
- Audio-visual annunciation devices.

All wiring

- From alarm initiating devices
- From circuit interface modules to various annunciation devices.
- Integration with Access control system
- Integration with Repeater panel

B. FUNCTIONAL OPERATION:

When a fire alarm condition is detected and reported by one of the system initiating devices or appliances, the following functions shall immediately occur:

- The system alarm LED shall flash.
- A local piezo-electric signal in the control panel shall sound.
- The 640-character LCD display shall indicate all information associated with the fire alarm condition, including the type of alarm point and its location within the protected premises.
- Printing and history storage equipment shall log the information associated each new fire alarm control panel condition, along with time and date of occurrence.
- All system output programs assigned via control-by-event equations to be activated by the particular point in alarm shall be executed, and the associated system outputs (alarm notification appliances and/or relays) shall be activated.

F.2.0 SUBMITTALS:

F.2.1 GENERAL:

Four copies of all submittals shall be submitted (PMC – 1 sets, Client- 1 sets, Design consultant-1set and vendor-1set) for review.

1. System manufacturer and experience. All references to manufacturer's model numbers and other pertinent information herein are intended to establish minimum standards of performance, function and quality. Equivalent equipment (compatible UL / EN54 Listed) from other manufacturers may be substituted for the specified equipment as long as the minimum standards are met.
2. System configuration and capability vis-à-vis specifications. All substitute equipment proposed as equal to the equipment specified herein, shall meet or exceed the following standards. For equipment other than that specified, the contractor shall supply proof that such substitute equipment equals or exceeds the features, functions, performance, and quality of the specified equipment.

F.2.2 SHOP DRAWINGS:

1. Sufficient information, clearly presented, shall be included to determine compliance with drawings and specifications.

2. Four Sets of shop drawings shall be submitted (PMC – 1 set, Client- 1 set, Design consultant-1set and vendor-1 set)
3. Include manufacturer's name(s), model numbers, ratings, power requirements, equipment layout, device arrangement, complete wiring point-to-point diagrams, and conduit layouts.
4. Show annunciator layout and main control panel module layout, configurations and Terminations

F.2.3 MANUALS:

1. Submit simultaneously with the shop drawings, complete operating and maintenance manuals listing the manufacturer's name(s) including technical data sheets.
2. Wiring diagrams shall indicate internal wiring for each item of equipment and the interconnections between the items of equipment.
3. Provide a clear and concise description of operation that gives, in detail, the information required to properly operate the equipment and system.
4. Approvals will be based on complete submissions of manuals together with shop drawings.

F.2.4 SOFTWARE MODIFICATIONS:

1. Provide the services of a factory trained and authorized technician to perform all system software modifications, upgrades or changes. Response time of the technician to the site shall not exceed 4/8/24 hours.
2. Provide all hardware, software, programming tools and documentation necessary to modify the fire alarm system on site. Modification includes addition and deletion of devices, circuits, zones and changes to system operation and custom label changes for devices or zones. The system structure and software shall place no limit on the type or extent of software modifications on-site. Modification of software shall not require power down of the system or loss of system fire protection while modifications are being made.

F.2.5 CERTIFICATIONS:

Together with the shop drawing submittal, submit a certification from the major equipment manufacturer indicating that the proposed supervisor of installation and the proposed performer of contract maintenance is an authorized representative of the major equipment manufacturer. Include names and addresses in the certification.

F.2.6 GUARANTEE:

All work performed and all material and equipment furnished under this contract shall be free from defects and shall remain so for a period of at least two (2) year from the date of acceptance. The full cost of maintenance, labor and materials consumable or non-consumable required to correct any defect during this two year period shall be included in the submittal bid.

F.2.7 POST CONTRACT MAINTENANCE:

- i) Complete maintenance and repair service for the fire alarm system shall be available from a factory trained authorized representative of the manufacturer of the major equipment for a period of five (5) years after expiration of the guaranty.
- ii) As part of the submittal, include a quote for maintenance contract to provide all maintenance, test, and repair described below. Include also a quote of unscheduled maintenance/repair, including hourly rates for technicians trained on this equipment, and response travel costs. Submittals that do not identify all post contract maintenance costs will not be accepted. Rates and costs shall be valid for the period of five (5) years after expiration of the guaranty.
- iii) Maintenance and testing shall be on a semiannual basis or as required by the local authority. A preventive maintenance schedule shall be provided by the contractor that shall describe the protocol for preventive maintenance. The schedule shall include Systematic examination, adjustment and cleaning of all detectors, manual fire alarm stations, control panels, power supplies, relays, water flow switches and all accessories of the fire alarm system.

v) Each circuit in the fire alarm system shall be tested semiannually.

vi) Each smoke detector shall be tested in accordance with the requirements of NFPA 72, Chapter 7 / EN 54.

F.2.8 APPROVALS:

1. The system must have proper listing and/or approval from any of the following internationally recognized agencies: UL / VDS / LPCB / EN54
2. Onward of the contract and before the placement of orders on sub vendors the following particulars shall be furnished and got duly approved.
3. Detailed performance data of various system modules and drawings.
4. Detailed selection and drawings of various signal initiating devices.
5. Wiring drawings and details and makes of wires and conduits.
6. Floor plans showing locations of various devices.

F.2.9 PRODUCT: EQUIPMENT:

5. All equipment and components shall be new, and the manufacturer's current model. The materials, appliances, equipment and devices shall be tested and listed by a nationally recognized approval agency for use as part of a protected premises protective signaling (fire alarm) system. The authorized representative of the manufacturer of the major equipment, such as control panels, shall be responsible for the satisfactory installation of the complete system.
6. All equipment and components shall be installed in strict compliance with manufacturers' recommendations. Consult the manufacturer's installation manuals for all wiring diagrams, schematics, physical equipment sizes, etc., before beginning system installation. Refer to the Riser/Connection diagram for all specific system installation/termination/wiring data.
7. All equipment shall be attached to walls and ceiling/floor assemblies and shall be held firmly in place (e.g. detectors shall not be supported solely by suspended ceilings). Fasteners and supports shall be adequate to support the required load.

F.2.10 CONDUIT & CABLES:

CONDUIT:

Conduit shall be in accordance with local and state requirements.

1. Where concealed wiring is required, wiring shall be installed in conduit or raceway. Conduit fill shall not exceed 40 percent of interior cross sectional area where three or more cables are contained within a single conduit. Cable must be separated from any open conductors of power, or class 1 circuits, and shall not be placed in any conduit, junction box or raceway containing these conductors.
2. Wiring for 24 volt control, alarm notification, emergency communication and similar power-limited auxiliary functions may be run in the same conduit as initiating and signaling line circuits. All circuits shall be provided with transient suppression devices and the system shall be designed to permit simultaneous operation of all circuits without interference or loss of signals.
3. Conduit shall not enter the fire alarm control panel or any other remotely mounted control panel equipment or back boxes, except where conduit entry is specified by the FACP manufacturer.
4. Conduit shall be 20mm or 25mm minimum.

CABLES:

1. All fire alarm system wiring must be new.
2. All control cables shall be 1100/650 V PVC Insulated, Armoured, Stranded, Twisted, Copper control cables having minimum cross section of 1.5 sq. inner PE with AL Mylar tape. The cables shall be Fire Resistant types. The cables shall be confirming to IS 1554: (Part-1) 1976.and NFPA 70.

3. All field wiring shall be completely supervised. In the event of a primary power failure, disconnected standby battery, removal of any internal modules, or any open circuits in the field wiring; a trouble signal will be activated until the system and its associated field wiring are restored to normal condition.

4 The Fire Alarm Control panel shall be capable of T-Tapping Class B (NFPA Style 4) Signalling Line Circuits. Systems, which do not allow, have restrictions to, for example, the amount of T-Taps, length of T-Taps etc., is not acceptable.

5. Cables without proper ISI certification shall not be accepted. The make of cables to be used by the contractor shall be subject to Client's/ Consultant's approval.

F.3.0 FIRE ALARM SYSTEM:

F.3.1 The main FACP Central Console shall contain a microprocessor based Central Processing Unit (CPU). The CPU shall communicate with and control the following types of equipment used to make up the system: Analogue addressable detectors, addressable modules, local and remote operator terminals, printers, annunciators, and other system controlled devices. It should be capable of incorporating fire alarm loops as per the interior designs.

F.3.2 The main FACP shall perform the following functions:

- a. Supervise and monitor all Analogue addressable detectors and monitor modules connected to the system for normal, trouble and alarm conditions.
- b. Supervise all initiating signaling and notification circuits throughout the facility by way of connection to monitor and control modules.
- c. Detect the activation of any initiating device and the location of the alarm condition. Operate all notification appliances and auxiliary devices as programmed.
- d. Visually and audibly announce any trouble, supervisory or alarm condition on operator's terminals, panel display, and annunciators.
- e. Cause operation of all notification appliances and auxiliary devices as programmed.

F.3.3 The FACP shall provide:

- Acceptance switch
- Alarm silence switch
- System reset switch
- Walk test switch.
- Lamp test switch.
- Block Acknowledge
- Control-By-Time
- Drift Compensation
- Pre-alarm Control Panel Indication
- NFPA 72 Smoke Detector Sensitivity Test
- Multiple printers' option.
- Alarm Verification, by device, with tally
- Multiple CRT Display Interface
- Non-Alarm Module Reporting
- Periodic Detector Test
- Trouble Reminder
- Upload/Download to PC Computer
- Alarm Verification with Tally
- Smoke Detector Maintenance Alert

F.3.4 The system/FACP shall be designed for 25% future expansion of signal loop interface boards.

F.3.5 The system shall provide the following facilities.

- To enable or disable or adjust sensitivity of any addressable device through the system keypad or operator terminal and also to enable alarm verification of each device.
- To store upto 400 system operations or events in a non-volatile memory. To generate system status reports and recall/print each operation at command of operator.
- To interrogate each detector and analyze detector response and to provide display and print abnormal deviation without inhibiting the system performance.

- To provide 'pre-signal alarm' signal when the detector is at 80 % of its alarm threshold.
- To cause the following operations upon activation of any detector, break glass unit or flow switch, unless otherwise specified.
- Activate all programmed notification circuits until silenced.
- Activate all audio-visual annunciation devices until reset.
- Release all magnetic door holders to adjacent zones on the fire door.
- Activation of any pressure (flow) switch shall cause supervisory alarm.

F.4.0 SYSTEM CAPACITY AND GENERAL OPERATION:

F.4.1 THE MAIN FIRE ALARM CONTROL PANEL:

- a. The control panel shall provide, or be capable of expansion to minimum 198 Analogue addressable devices (any combination) per loop.
- b. The Fire Alarm Control Panel shall include a full featured operator interface control and annunciation panel that shall include a backlit, minimum 80 character liquid crystal display, individual, color coded system status LED's, and an alphanumeric keypad for the field programming and control of the fire alarm system.
- c. All programming or editing of the existing program in the system shall be achieved without special equipment and without interrupting the alarm monitoring functions of the fire alarm control panel.
- d. The panel shall be field programmable or from the operator Terminal with two level password protection

- Status level changes
- Actual change in program
- All changes shall be recorded with date & time stamp and authorization.
- The panel should have an in-built card to facilitate networking.

F.4.2 CENTRAL PROCESSING UNIT:

1. The Central Processing Unit shall communicate with monitor, and control all other modules within the control panel. Removal, disconnection or failure of any control panel module shall be detected and reported to the system display by the Central Processing Unit.
2. The Central Processing Unit shall contain and execute all control-by-event programs for specific action to be taken if an alarm condition is detected by the system. The control by event programs shall provide the following logical operations on the analogue addressable devices: AND, OR, NOT, CROSSZONE, Etc. Such control-by-event programs shall be held in non-volatile programmable memory, and shall not be lost with system primary and secondary power failure.
 2. The Central Processing Unit shall also provide a real-time clock for time annotation of all system displays. The Time-of-Day and date shall not be lost if system primary and secondary power supplies fail.
 3. The CPU shall be capable of being programmed on site without requiring the use of any external programming equipment. Systems that require the use of external programmers or change of EPROM's are not acceptable.
 4. The CPU and associated equipment are to be protected so that they will not be affected by voltage surges or line transients consistent with UL standard 864.
6. Each peripheral device connected to the CPU shall be continuously scanned for proper operation. Data transmissions between the CPU and peripheral devices shall be reliable and error free. The transmission scheme used shall employ dual transmission or other equivalent error checking techniques.

F.4.3 DISPLAY:

1. The display assembly shall contain, and display as required, custom alphanumeric labels for all Analogue addressable detectors, addressable modules, and software zones.
2. The system display shall provide an minimum 80-character backlit alphanumeric Liquid Crystal Display (LCD). It shall also provide five Light-Emitting-Diodes (LEDs) that will indicate the status of the following

system parameters: AC POWER, SYSTEM ALARM, SYSTEM TROUBLE, DISPLAY TROUBLE, and SIGNAL SILENCE.

2. The system display shall provide a 25-key touch keypad with control capability to command all system functions, entry of any alphabetic or numeric information, and field programming. Two different password levels shall be accessible through the display interface assembly to prevent unauthorized system control or programming.
3. The system display shall include the following operator control switches: SIGNAL SILENCE, LAMP TEST, RESET, SYSTEM TEST, and ACKNOWLEDGE.

F.4.4 SIGNALING LINE CIRCUIT (SLC) INTERFACE BOARD:

1. The SLC board shall monitor and control a minimum of 198 Analogue addressable devices. This includes analog addressable detectors (Photoelectric, or thermal) and monitor or control modules.
2. The SLC interface board shall contain its own microprocessor, and shall be capable of operating in a local mode (any SLC input activates all or specific SLC outputs) in the unlikely event of a failure in the main CPU of the control panel.
3. The SLC interface board shall not require any jumper cuts or address switch settings to initialize SLC Loop operations.
4. The SLC interface board shall provide power and communicate with all analogue addressable detectors and modules connected to its SLC Loop on a single pair of wires. This SLC Loop shall be capable of operation as NFPA Style 4 or Style 6.
5. The SLC interface board shall be able to drive two Class B (NFPA Style 4) circuits each up to 10,000 feet in length, for an effective loop distance of 20,000 feet.
6. The SLC interface board shall receive analog information from all analogue addressable detectors and shall process this information to determine whether normal, alarm, or trouble conditions exist for that particular detector. The SLC interface board software shall include software to automatically maintain the detector's desired sensitivity level by adjusting for the effects of environmental factors, including the accumulation of dust in each detector. The analog information may also be used for automatic detector testing and for the automatic determination of detector maintenance requirements.

F.4.5 SERIAL INTERFACE BOARD:

1. The Serial Interface Board shall provide an EIA-232 interfaces between the fire alarm control panel and the UL Listed Electronic Data Processing (EDP) peripherals.
2. The Serial Interface Board shall allow the use of multiple printers, CRT monitors, and other peripherals connected to the EIA-232 ports.
3. The Serial Interface Board shall provide one EIA-485 port for the serial connection to annunciation and control subsystem components.
4. The Serial Interface Board shall have LEDs that will show that it is in regular communication with the annunciators or other EIA 485 connected peripheral device.
5. EIA-232 serial output circuits shall be optically isolated to assure protection from earth ground.

F.4.6 ENCLOSURES:

1. The control panels shall be housed in a cabinet suitable for surface or semi-flush mounting. Cabinet and front shall be corrosion protected, given a rust-resistant prime coat, and manufacturer's standard finish.
2. The back box and door shall be constructed of .060 steel with provisions for electrical conduit connections into the sides and top.
3. The door shall provide a key lock and shall include a glass or other transparent opening for viewing of all indicators. For convenience, the door may be hinged on either the right or left side (field selectable).
4. The control unit shall be modular in structure for ease of installation, maintenance, and future expansion.

F.4.7 POWER SUPPLY:

1. The Main Power Supply shall operate on 230 VAC, 50 Hz, and shall provide all necessary power for the FACP.
2. It shall provide 3.0 amps of usable notification appliance power, using a switching 24 VDC regulator.
3. It shall be expandable for additional notification appliance power in 3.0-ampere increments.

4. It shall provide a battery charger for 24 hours of standby using dual-rate-charging techniques for fast battery recharge.
5. It shall provide a very low frequency sweep earth detect circuit, capable of detecting earth faults on sensitive addressable modules.
6. It shall be power-limited using Positive Temperature Coefficient (PTC) resistors.
7. It shall provide meters to indicate battery voltage and charging current.
8. The power supply shall be capable of charging NICAD batteries up to 32 Amp Hours

F.5.0 SYSTEM COMPONENTS:

F.5.1 ADDRESSABLE DETECTORS:

- i. Detectors shall be Analogue and Addressable, and shall connect with two wires to the fire alarm control panel signaling Line Circuits. Addressable smoke and thermal detectors shall provide dual (2) alarm and power LED's. Both LED's shall flash under normal conditions, indicating that the detector is operational and in regular communication with the control panel, and both LED's shall be placed into steady illumination by the control panel, indicating that an alarm condition has been detected. If required, the flashing mode operation of the detector LED's shall be optional through the system field program. An output connection shall also be provided in the base to connect an external remote alarm LED.
- ii. Smoke detector sensitivity shall be set through the Fire Alarm Control Panel and shall be adjustable in the field through the field programming of the system. Sensitivity may be automatically adjusted by the panel on a time-of-day basis. Using software in the FACP, detectors shall automatically compensate for dust accumulation and other slow environmental changes that may affect their performance. The detectors shall be listed by UL as meeting the calibrated sensitivity test requirements of NFPA Standard 72, Chapter 7.
- iii. The detectors shall be ceiling-mount with sealed sensing chambers and suitable for stable operation in an ambient temperature of 0 to 49°C and against 7.5mps air velocity. The detectors shall include a separate twist-lock base, which includes a tamper proof feature. Wherever specified, an optional base shall be provided with a built-in (local) sounder rated at 85 dB minimum which will be driven by the system power without the need for an additional supervised power.
- iv. The detectors shall provide a test means whereby they will simulate an alarm condition and report that condition to the control panel. Such a test may be initiated at the detector itself (by activating a magnetic switch) or initiated remotely on command from the control panel.
- vi. Detectors shall also store an internal identifying type code that the control panel shall use to identify the type of device Ionization, Photoelectric,
- vii. Thermal: Rated at 135 degrees Fahrenheit (58°C) and have a rate-of-rise element rated at 15 degrees Fahrenheit (9.4°C) per minute.
- viii. Fixed temperature detector for applications, which don't require rate-of-rise element .Duct ionization.

F.5.2 REFLECTED TYPE BEAM SMOKE DETECTOR

DELETED

F.5.3 ADDRESSABLE MANUAL CALL POINT (BREAK GLASS / PULL TYPE):

- i Addressable MCP / Pull Boxes shall, on command from the control panel, send data to the panel representing the state of the manual switch. They shall use a key operated test-reset lock, and shall be designed so that after actual emergency operation, they cannot be restored to normal use except by the use of a key.
- ii. All operated stations shall have a positive, visual indication of operation and utilize a key type reset.
- iii. Manual Stations shall be constructed of Lexan with clearly visible operating instructions provided on the cover. The word FIRE shall appear on the front of the stations in raised letters, 1.75 inches or larger.
- iv. Stations shall be suitable for surface mounting or semiflush mounting as shown on the plans, and shall be installed not less than 42 inches, more than 48 inches above the finished floor.

F.5.4 ELECTRONIC SOUNDERS / SPEAKERS:

- i. Electronic sounders shall operate on 24 VDC nominal.
- ii. Electronic sounders shall be field programmable without the use of special tools, to provide slow whoop, continuous, or interrupted tones with an output sound level of at least 90 dBA measured at 10 feet from the device, with a frequency response of 2000- 8000 Hz with a lower power rating and shall also incorporate a

suitable microphone for talk back to the control panel. Listed for fire services and protected against temperature effects. Failure of audio amplifiers shall result in a trouble signal.

iii. Shall be flush or surface mounted as shown on plans.

F.5.5 ADDRESSABLE MONITOR MODULE:

- i. Addressable Monitor Modules shall be provided to connect one supervised zone of conventional Alarm Initiating Devices (any N.O. Dry contact device) to one of the Fire Alarm Control Panel Signaling Line Circuit (SLC) Loops.
- ii. The Monitor Module shall mount in a 4-inch square, 2-1/8" deep electrical box

F.5.6 ADDRESSABLE CONTROL MODULE:

- i. Addressable Control Modules shall be provided to supervise and control the operation of one conventional Notification Appliance Circuit (NAC) of compatible, 24 VDC powered, polarized Audio/Visual Notification Appliances. For fan shutdown and other auxiliary control functions, the control module may be set to operate as a dry contact relay.
- ii. The Control Module shall mount in a standard 4-inch square, 2-1/8" deep electrical box, or to a surface mounted backbox.
- iii. The relay coil shall be magnetically latched to reduce wiring connection requirements, and to insure that 100% of all auxiliary relay or NACs may be energized at the same time on the same pair of wires.
- iv. Audio/visual power shall be provided by a separate supervised power loop from the main Fire Alarm Control Panel or from a supervised, UL listed remote power supply.
- v. The Control Module shall provide address-setting means using decimal switches and shall also store an internal identifying code that the control panel shall use to identify the type of device. An LED shall be provided that shall flash under normal conditions, indicating that the control module is operational and is in regular communication with the control panel. A magnetic test switch shall be provided to test the module without opening or shorting its NAC wiring.

F.5.7 FAULT ISOLATOR MODULE:

- i. Fault Isolator Modules shall be provided to automatically isolate wire-to-wire short circuits on an SLC loop. The Fault Isolator Module shall limit the number of modules or detectors that may be rendered inoperative by a short circuit fault on the SLC Loop. At least one fault isolator module shall be provided for each floor or protected zone of the building. If a wire-to-wire short occurs, the Fault Isolator Module shall automatically open-circuit (disconnect) the SLC loop. When the short circuit condition is corrected, the Fault Isolator Module shall automatically reconnect the isolated section. The Fault Isolator Module shall not require any address setting, and its operations shall be totally automatic. It shall not be necessary to replace or reset the Fault Isolator Module after its normal operation.
- ii. The Fault Isolator Module shall mount in a standard 4-inch deep electrical box or in a surface mounted backbox. It shall provide a single LED that shall flash to indicate that the Isolator is operational and shall illuminate steadily to indicate that a short circuit condition has been detected and isolated.
- iii. The Fault Isolator Module shall mount in a standard 4-inch deep electrical box or in a surface mounted backbox. It shall provide a single LED that shall flash to indicate that the Isolator is operational and shall illuminate steadily to indicate that a short circuit condition has been detected and isolated.

F.5.8 ANNUNCIATOR:

- i. The annunciator shall communicate to the fire alarm control panel via an EIA 485 (multidrop) two-wire communications loop. The system shall support two 6,000-ft. EIA-485 wire runs. Up to 32 annunciators, each configured up to 64 points may be connected to either of the two connections, for a system capacity of 2,048 points of annunciation.
- ii. An EIA-485 repeater shall be available to extend the EIA-485 w distance in 3,000-ft. increments. An optional (UL 864 listed) Version shall allow the EIA-485 circuit to be transmitted over Fiber optics.

iii. Each annunciator shall provide up to 64 RED alarm and 64 trouble indications using a long-life LED's. Up to 64 control switches shall also be available for the control of Fire Alarm Control Panel functions. The annunciator will also have an "ON-LINE" LED, local piezo sounder, local acknowledge and lamp test switch, and custom zone/function identification labels.

iv. The annunciator may be field configured to operate as a "Fan Control Annunciator". When configured as "Fan Control", the Annunciator may be used to manually control fan or damper operation and can be set to override automatic commands to all fans/dampers programmed to the annunciator.

v. Annunciator switches may be programmed for System control Such as, Global Acknowledge, Global Signal Silence, Global System Reset, and on/off control of any control point in the system.

vi. The system shall offer an interface to a graphic style annunciator and provide each of the features listed above.

F.5.9 BATTERY CHARGER:

1. Shall be completely automatic, with constant potential charger maintaining the battery fully charged under all service conditions. Charger shall operate from a 230-volt 50-hertz source.
2. Shall be rated for fully charging a completely discharged battery within 48 hours while simultaneously supplying any loads connected to the battery.
3. Shall have protection to prevent discharge through the charger.
4. Shall have protection for overloads and short circuits on both AC and sides.

F.6.0 EXECUTION:

F.6.1 INSTALLATION:

Installation shall be in accordance with the NFPA 72, local and state codes, as shown on the drawings and as recommended by the major equipment manufacturer.

All conduit, junction boxes, conduit supports and hangers shall be concealed in finished areas and may be exposed in unfinished areas. Smoke detectors shall not be installed prior to the system programming and test period. If construction is ongoing during this period, measures shall be taken to protect smoke detectors from contamination and physical damage.

All fire detection and alarm system devices, control panels and remote annunciators shall be flush mounted when located in finished areas and may be surface mounted when located in unfinished areas.

All wiring shall be carried out with 660 V grade PVC insulated FRLS Cables in galvanized steel conduit. Cable less than 1 sq. mm. shall not be used. Power cables for 400/230 V system shall be drawn in separate conduits. All junction boxes and conduit accessories shall be of galvanized steel.

F.7.0 TYPICAL OPERATION:

Actuation of any manual station, smoke detector, heat detector shall cause the following operations to occur unless otherwise specified:

1. Activate all programmed notification circuits until silenced.
2. Actuate all strobe / sounder units until the panel is reset.
3. Annunciate the active initiating devices and zones.
4. Release all magnetic door holders to doors to adjacent zones on the floor from that the alarm was initiated.
5. In addition to the above functions shut down the ventilation system or close associated control dampers as appropriate.
6. Shut down / Trip all Ventilation Fan Mechanism.

F.8.0 TEST:

The system shall be tested and commissioned by a qualified competent, trained engineer or technician authorized by the manufacturer of the fire alarm equipment to technically supervise and participate during all of the adjustments and tests for the system.

1. Before energizing the cables and wires, check for correct connections and test for short circuits, ground faults, continuity, and insulation. No wiring installation offering a resistance of less than 1.0 mega ohm shall be energized.

2. Open initiating device circuits and verify that the trouble signal actuates.

3. Open signaling line circuits and verify that the trouble signal actuates.
4. Notification appliances circuit and verify response of trouble signals.
5. Check presence and audibility of tone at all alarm notification devices.
6. Check installation, supervision, and operation of all Analogue addressable smoke detectors during a walk test.
7. Each of the alarm conditions that the system is required to detect should be introduced on the system. Verify the proper receipt and the proper processing of the signal at the FACP and the correct activation of the control points.
8. When the system is equipped with optional features, the manufacturer's manual should be consulted to determine the proper testing procedures. This is intended to address such items as verifying controls performed by individually addressed or grouped devices, sensitivity monitoring, verification functionality and similar.

F.9.0 POST COMPLETION HANDING OVER DOCUMENTS:

Contractor's scope of work also covers post completion handing over documents, which will cover.

- a) As Built Drawings.
- b) Installation & maintenance manuals of all equipment.
- c) Test & warranty certificates of all bought out items.
- d) Test certificates for all equipment.
- e) Statutory documents required for record.
- f) Testing & commissioning Documents in standard forms.

Final Inspection:

At the final inspection a factory-trained representative of the manufacturer of the major equipment shall demonstrate that the systems function properly in every respect.

Instruction:

Provide instruction as required for operating the system. Hands-on demonstrations of the operation of all system components and the entire system including program changes and functions shall be provided. The contractor and/or the systems manufacturer's representatives shall provide a typewritten "sequence of operation" to the owner.

F.11.0 CABLE SPECIFICATIONS:

For Fire Device/Detection Loop:

ATC conductor stranded, PVC insulated to form a core, Cores laid up, overall shielded with Alu-mylar tape with tinned copper drain wire of size 0.5 Sq. mm, PVC inner sheathed G.I. Wire armoured, PVC sheathed cable.

Sr. Description

- 1 2 Core X 1.5 Sq. mm Multi Stranded Copper, FRLS Armoured cable (**Red in Colour**)
 2 4 Core X 1.5 Sq. mm Multi Stranded Copper, FRLS Armoured cable

SECTION G

APPROVED LIST OF MATERIAL

NOTE: CLIENT RESERVES RIGHT TO ASK FOR ANY OF THE FOLLOWING APPROVED MAKES TO BE USED DURING DISCUSSIONS. CONTRACTOR SHALL INDICATE WHICH MAKE HAS BEEN CONSIDERED WHILE QUOTING THE RATES.

I. FIRE ALARM SYSTEM

Fire Alarm Control Panel	: / Notifier / Cooper / Siemens
Repeater Panel	: / Notifier / Cooper / Siemens
Addressable Smoke Detector	: / Notifier / Cooper / Siemens
Addressable Multi Sensor Detector	: / Notifier / Cooper / Siemens
Addressable Heat Detector	: / Notifier / Cooper / Siemens
Addressable Strobe Cum Sounder	: / Notifier / Cooper / Siemens
Addressable Sounder / Hooter	: / Notifier / Cooper / Siemens
Addressable Manual Call point	: / Notifier / Cooper / Siemens
Addressable Monitor Module	: / Notifier / Cooper / Siemens
Addressable Control Module	: / Notifier / Cooper / Siemens
FRLS Armoured Cable	: Finolex Polycab / KEI / Thermoflex / RPG / RR Kabel /

SECTION

LIST OF STANDARD

1. National Fire Protection Association (NFPA) Standards:
2. IS 2189
3. NFPA 70 National Electric Code
4. NFPA 72 National Fire Alarm Code
5. BS 5839
6. Underwriters Laboratories, Inc. (UL) Publication
7. Uniform Building Code (UBC), including local amendments.
8. FCC Part 15, Subpart J, Class A.

LIST OF ACCEPTABLE MAKE

S. No.	Item	Name of Manufacturers
1.	FRLS PVC insulated copper conductor single core/ XLPE armoured cable cable for wiring. (ISI marked)	R.R Kable/ Havells/Grandlay/Polycab/Bonton
2.	Telephone Cables Co-exail TV cables	Delton/Kent/Finolex /Polycab
3.	CAT-6 Cables for LAN wiring	D-Link/Legrand /Finolex/Avaya/Lucent/ RR Kable.

	& Internet Cable	
4.	MS Conduit i/c accessories (ISI marked)	AKG/BEC/NIC/Steelcraft / JPC Pipes/RMCON
5.	DWC Pipe	REX/Duraline/Gemini pipe
6.	Modular switch, socket/Telephone socket/cable TV socket/Data outlet Socket/Fan Regulator/Metal Boxes/ Occupancy sensor	Legrand-(Arteor)/ M.K.(Blenze)/ Crabtree/Anchor Woods/C&S
7.	GI Pipe	Tata/Jindal (Hissar)/Prakash Surya/Swastik
8.	Paints	ICI/Asian/Berger
9.	Terminal Blocks and connectors	Elmex/Eszen/Connect Well.
10.	Compact air insulated rising main.	Legrand/Schneider/L&T/GE
11.	MCB, MCBDB, RCBO's/RCCB's,	Schneider Electric/Legrand/L&T Hagger Siemens/ABB/C&S
12.	MCCB/Timer	Schneider Electric/ Siemens/Larsen & Toubro/ Legrand/L&T Multiline/ Havells/ABB/C&S
13.	SFU, FSU, HRC Fuses, cable management system/DLP Trunking	Schneider Electric/ Siemens/ Legrand/ L&T/ Havells/C&S
14.	Ammeter/Voltmeter	AE/IMP/Rishabh/HPL (only digital type to be used)
15.	Selector Switch/CT's	Kayee/Siemens/Bhartiya Cutler Hammer/L&T
16.	Change over Switch	HPL/H-Elcon/Standard/L&T/Siemens/ Havells/C&S
17.	Indicating Lamps	Teknic/Siemens/L&T/Vaishnov
18.	Panel Board/Feeder Pillar	Manufacturers having ISO 9001 certification & CPRI approved
19.	Energy Meter/Multifunctional/Intelligent Energy Meter.	HPL/L&T/Hensel/Anchor/Siemens.
20.	Fresh Air Fan/Wall Mounted Fan/Ceiling fan/Exhaust fan. (only energy efficient fans, consuming ≤ 50 W and CMM ≥ 200 for 1200 mm & 60 W and CMM ≥ 240 for 1400 mm shall be used).	Crompton/Orientp/Polar/Khaitan/ Ortem/ Usha
21.	Fluorescent/CFL/LED/Flood/Bulk head Fitting	Phillips/Wipro/syska
22.	Lamps	GE/Osram/Phillips/Wipro/C&S
23.	Wall Brackets	DECON/Phillips/GE/Havells
24.	Angle Holder/Batten Holder (ISI marked)	Kinjal/Emperor/Anchor
25.	Geyser	Racold/Crompton/Jaguar./AO Smith
26.	NRV/Gate Valve	Sant/Leader/BS
27.	XLPE insulated PVC sheathed aluminium cable upto 1.1 KV Gd	Polycab/Finolex//Nicco/KEI/Grandlay/ Gloster/Universal/Bonton/RR Kabel
28.	PVC conduit i/c accessories	Precision/Asian/Diamond/Mod./AKG/JPC Pipes
29.	Paino type Switches/Socket/TV / Telephone Outlet (ISI marked)	Anchor/Rider/Leader

Superintending Engineer,
AIIMS Rishikesh

Schedule of Quantities

S.no	Item	Unit	Quantity	Rate	Amount
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1	Supply, installation, testing & commissioning of 1 Loop Networkable Intelligent Analogue Addressable Fire Alarm Control Panel with minimum 80 characters LCD display including 4 Loop driver cards, network card, in-built battery backup for 24 hrs.in standby mode & 30 min in alarm condition mode and with required accessories.	Nos.	3		
2	Supply, installation, testing & commissioning of Analogue Addressable Photoelectric type Smoke detectors with detector mounting base & required accessories.	Nos.	60		
3	Supply, installation, testing & commissioning of Analogue Addressable Multi-Sensor detectors combined (Photo + Thermal) with detector mounting base & required accessories.	Nos.	5		
4	Supply, installation, testing & commissioning of Analogue Addressable Rate of Rise Thermal (Heat) detectors with detector mounting base & required accessories	Nos.	10		
6	Supply, installation, testing & commissioning of Addressable Manual Call Points (Break Glass Type / Pull Station Type) The same shall be made of ABS plastic, square in shape Surface / Flush Mounting with mounting base & required accessories. It shall have a "Break glass" message embedded on the glass (In case of break glass type MCP). The addressable module shall be enclosed along with the break glass in a junction box	Nos.	10		
7	Supply of Additional break glasses (In case of break glass type MCP)	Nos.	20		
9	Supply, installation, testing & commissioning of Ceiling mounted Addressable Strobe cum Sounder. The strobe cum sounder shall be made of ABS plastic material & have the Db level of 90 dBs and a multi tone facility, The strobe shall be adjustable to 110 candelas. complete with mounting base & required accessories. The addressable module shall be enclosed / fitted in a junction box.	Nos.	8		
11	Supply, installation, testing & commissioning of control module for Hooter	Nos.	8		
13	Supply and laying of 2C x 1.5 Sq.mm, Multistranded Copper, FRLS Armoured cable laid on surface with GI saddle-spacers every 0.4 meters. Complete with GI Junction Box, lugs, cable compression glands, cable tags, ferruling and end termination. (Red in Colour)	Meter	3000		
15	Supply, installation, testing & commissioning of CO sensors as required with complete accessories	Nos.	50		
17	CAMC Charges :- For next five years after completion of warranty period. Comprehensive Annual Maintenance Contract Services. Providing Comprehensive Maintenance Services for 5 Years after Handing Over and after completion of comprehensive warranty period of 1 yrs . CAMC includes providing required manpower, tools and tackles, spares, consumables, taxes, duties & levies etc., Annual Validation of the Laboratory, complete as given in the Scope of Work, Technical Specifications and Conditions of Contract				
a	During 2nd Year, after completion of warranty period of	LS Job	1		

	1 years				
b	During 3rd Year,	LS Job	1		
c	During 4th Year,	LS Job	1		
d	During 5th Year,	LS Job	1		
e	During 6th Year,	LS Job	1		