

**GOVERNMENT OF UTTARAKHAND
UTTARAKHAND CIVIL AVIATION DEVELOPMENT AUTHORITY**

E-mail: ucadadoon@gmail.com

Web-site: <https://ucada.in/>

**RFP FOR INSTALLATION OF AUTOMATED WEATHER OBSERVING
SYSTEMS AND CEILOMETERS ON CHAR DHAM YATRA ROUTE
(INCLUDING COMPREHENSIVE MAINTENANCE FOR 03 YEARS)**

Through

e-Procurement Portal www.uktenders.gov.in

SECTION I: NOTICE INVITING BID (NIB)

Bid Reference No: 1581/UCADA/AWOS/2025 - 2nd Call

Dated: 01-09-2025

Uttarakhand Civil Aviation Development Authority
Uttarakhand Civil Aviation Development Authority (UCADA) Sahastradhara Heliport,
Mussoorie by pass, P.O. Kulhan Dehradun-248001, Uttarakhand (India)
E-mail: ucadadoon@gmail.com
Web-site: <https://ucada.in/>

Notice inviting bid for Installation of Automated Weather Observing Systems and Ceilometers on Char Dham Yatra Route through e- procurement portal only- www.uktenders.gov.in.

1. Chief Executive Officer UCADA (Referred to as the "Employer") invites Bids from eligible Bidders for Installation of Automated Weather Observing Systems and Ceilometers on Char Dham Yatra Route (hereinafter referred to as "the Works ") through E-Procurement Portal.
2. Bidding is national Competitive Bidding and the bidding shall be conducted under Single Stage Two-Envelope Bidding process with E-Procurement, comprising Technical Bid and Financial Bid.
3. Bids must be submitted through E-Procurement Portal within the last date and time for submission of Bids. E-Procurement System requires the Bidder to submit Technical Bid and Financial Bid simultaneously. No physical submission of Bid shall be accepted.
4. To qualify for award of the Contracts, the Bidders are advised to note the Eligibility and Qualification criteria specified in Section IV of the Bid Document.
5. Technical Bids will be opened in the e-Procurement Portal as specified in the Schedule of Bidding Process. If the office of the Employer happens to be closed on the specified date of opening of the Bids, then they will be opened on the next working day at the same time & place as notified earlier.
6. All notifications, changes and amendments to the Bid Document will be posted only on the e-Procurement Portal which shall form part of the Original Bid Document.
7. The Schedule of Bidding Process is as below:

Date, time and place for procuring Bid	01/09/2025 Time 18:00 HRS
Pre-Bid meeting date, time and place	08-09-2025 at 1200Hrs Venue: Online Link for participation: https://meet.google.com/rfc-pved-qht
Last date & time for submission of online Bids on E-Procurement Portal	15-09-2025 up to 1100 Hrs
Date and time for opening of Technical Bid on the E-Procurement Portal	15-09-2025 at 1200Hrs

Validity of Bids	180 days from the last date for submission of Bids
Period for Completion of Works	02 months
Period of CAMC	03 years and shall commence after commissioning & testing of all the systems.
Address for Communications	Uttarakhand Civil Aviation Development Authority (UCADA) Sahastradhara Heliport, Mussoorie by pass, P.O. kulhan Dehradun 248001, Uttarakhand (India)
Earnest Money Deposit (EMD) Amount	Rs. 8,60,400 In favour of CEO, UCADA to be submitted as original as provided in Clause 12 of ITB.
Tender Fee	Rs 4500 (inclusive of Taxes) (non-refundable) in favour of CEO, UCADA to be submitted as original DD

8. Bids without Tender fee and EMD's documentary proof as required under the Bid Document will be summarily rejected and such Bid shall not be considered for any further evaluation. The decision of the tender committee shall be legally binding and acceptable to the bidders in this regard.
9. For any additional information or clarification regarding the Bid, the interested Bidder, may contact the office of the undersigned at the address given below on all working days during office hours before the date of Pre-Bid meeting. Bidders may also send their queries to mentioned website.
10. The Employer reserves the right to accept or reject or cancel any or all the Bids or to abandon the procurement process in the administrative/work/ public/ project interest. The decision of the competent authority shall be legally binding and acceptable to the bidders in this regard.

-sd-
Chief Executive Officer
UCADA

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SECTION II: INSTRUCTIONS TO BIDDERS (ITB)

A. General

1. Scope of Bid

- 1.1. The Employer invites Bids following E-Procurement System procedure from eligible Bidders (or 'tenderer', or as defined in procurement rules) execution of Works as detailed in this RFP.

2. One Bid Per Bidder

- 2.1. Each Bidder shall submit only one Bid (comprising Technical Bid and Financial Bid). Bidder who submits more than one Bid will be disqualified.
- 2.2. All Bidders are required to register in the Uttarakhand Government E- Procurement Portal. The Bidders, who submits their Bid after digitally using their Digital Signature Certificate (DSC), accept that they have clearly understood and agreed the terms and conditions including all the Forms / Appendices of this Bid.

3. Eligibility and Qualification Criteria

- 3.1. The Bidder should satisfy eligibility conditions and establish their competence and capacity based on the qualification criteria specified in Section IV. This invitation for Bid is open to all eligible Bidders meeting the Qualification Criteria.
- 3.2. The decision to allow or not allow Joint Ventures and Consortiums are specified in the Bid data sheet
- 3.3. The Employer may permit subcontracting for certain specialized works as indicated in Section IV. When subcontracting is permitted by the Employer, the specialized subcontractor's experience shall be considered for evaluation. Section IV describes the qualification criteria for sub-contractors.

4. Rejection of Bid

- 4.1. Non adherence to any of the eligibility and qualification criteria mentioned in the Bid Documents shall lead to the rejection of Bid.
- 4.2. The Employer reserves the right to verify all statements, information and documents submitted by the Bidder in response to the ITB and the Bidder shall, when so required by the Employer, make available all such information, evidence and documents as may be necessary for such verification. Any such verification, or lack of such verification, by the Employer shall not relieve the Bidder of its obligations or liabilities hereunder nor will it affect any rights of the Employer thereunder.
- 4.3. The Employer reserves the right to reject any Bid and appropriate the Earnest Money Deposit if:
 - a) at any time, a material misrepresentation is made or uncovered, or
 - b) the Bidder does not provide, within the time specified by the Employer, the supplemental information sought by the Employer for evaluation of the Bid.

Such misrepresentation/ improper response shall lead to the disqualification of the Bidder. If the Bidder is a Joint Venture, then the entire Joint Venture and each member of the Joint Venture may be disqualified/rejected. If such disqualification/rejection occurs after the Bids have been opened and the lowest

Bidder gets disqualified/rejected, then the Authority reserves the right to annul the Bidding Process and invites fresh Bids.

- 4.4. In case it is found during the evaluation or at any time before signing of the Contract or after its execution and during the period of subsistence thereof, including the concession thereby granted by the Employer, that one or more of the eligibility and /or qualification requirements have not been met by the Bidder, or the Bidder has made material misrepresentation or has given any materially incorrect or false information, the Bidder shall be disqualified forthwith if not yet appointed as the Contractor either by issue of the LOA or entering into the Contract, as the case may be, the same shall, notwithstanding anything to the contrary contained therein or in this ITB, be liable to be terminated, by a communication in writing by the Employer to the Selected Bidder, without the Employer being liable in any manner whatsoever to the Selected Bidder. In such an event, the Employer shall be entitled to forfeit and appropriate the EMD/Performance Security, as damages, without prejudice to any other right or remedy that may be available to the Employer under this ITB, the Bidding Documents, or otherwise.

B. The Bid Documents

5. Contents of Bid Documents

5.1. The Bid Documents shall include:

- a) Section I - Notice Inviting Bids;
- b) Section II - Instruction to Bidder (ITB);
- c) Section III - Bid Data Sheet
- d) Section IV - Eligibility and Qualification criteria;
- e) Section V - Formats for Submission of Bids
- f) Section VI – Minimum Technical Specifications;
- g) Section VII- General Conditions of Contract (GCC);
- h) Section VIII- Special Conditions of Contract (SCC); and
- i) Section XI - Formats
 - i. Form of Bank Guarantee for Performance Security Deposit
 - ii. Any modification, clarifications, addendum/ corrigendum issued to the original Bid Document, pre-bid meeting proceedings.

5.2. The Bid documents may be downloaded from the E-Procurement Portal (www.uktenders.gov.in), however, the Bidder must upload the scanned copy of the instrument/payment-receipt of online payment/ e-challan or e-BG etc. as a proof of tender fee/EMD submission.

5.3. The Bidder is expected to examine all instructions, conditions of contract, forms, terms and specifications, bill of quantities in the Bid Documents. Failure to furnish all information required by the Bid Documents or submission of a Bid not substantially responsive to the Bid Documents in all respects will be at the Bidder's risk and may result in rejection of its Bid.

6. Amendment to Bid Documents

6.1. Before the deadline for submission of Bids, the Employer may, modify the Bid Documents by notifying on the E- Procurement Portal through issue of Addendum or Corrigendum or Clarification. Any Addendum or Corrigendum or Clarification issued by the Employer shall form part of the Bid Document.

6.2. In order to allow prospective Bidders, reasonable time, to take the amendment into account in preparing their Bids, or procuring entity decide so, the deadline for the submission of Bids as necessary may be extended. Information about extension of the deadline for the submission of Bids will be published on E- Procurement Portal.

7. Pre-Bid Meeting and Clarification of Bid Documents

7.1. The E-Procurement Portal provides for online clarification. A prospective Bidder requiring any clarification of the Bid Documents may notify the Employer in writing or by email at the mailing address indicated in the Notice Inviting Bids one day prior to date of pre-bid meeting. The Employer will respond in writing to any request for clarification received earlier than the number of days, as specified in the Bid Data Sheet, prior to the last date and time for submission of Bids. The Employer's response will be uploaded in the E-Procurement Portal including a description of the enquiry sought for the information of public or the other Bidders without identifying the source of request for clarification.

- 7.2. If the pre-bid meeting is to be held, the Bidder or his authorized representative is invited to attend it. Its time, date and venue is given in Section I and in the Bid Data Sheet
- 7.3. The purpose of the pre-bid meeting will be to clarify issues and to answer questions on any matter that may be raised at that stage.
- 7.4. Queries raised and the responses given will be uploaded by the Employer on the E-Procurement Portal. Any modification to the Bid Documents listed in Sub-Clause 5.1, which may become necessary as a result of the pre-bid meeting shall be made by the Employer exclusively through the issue of an Addendum/Corrigendum/ Clarification pursuant to Clause 6 and / or through the minutes of the pre-bid meeting.
- 7.5. Non- attendance at the pre-bid meeting will not be a cause for disqualification of a Bidder.

C. Preparation of Bids

8. Language of Bid

- 8.1. The Bid prepared by the Bidder, as well as all supporting documents, the correspondence and documents relating to the Bid exchanged by the Bidder and the Employer, shall be in [English/Hindi] language as decided by Employer. All supporting documents other than [Hindi/English] language needs transcript/ translation, provided they are accompanied by a self-certified accurate translation of the relevant passages in [Hindi/English] language, in which case, for purposes of interpretation of the Contract, this translation shall govern. The Bidder shall bear all the costs and all risks of the accuracy of such translation.

9. Cost of Tendering

- 9.1. The Bidder shall bear all costs associated with preparation and submission of its Bid, and the Employer in no case be responsible and liable for those costs regardless of the outcome of Procurement process.

10. Document Constituting the Bid

- 10.1. The Bid should be uploaded in the E- Procurement Portal under a two Bid document system comprising the following documents.

A- First Electronic Document shall be named PART – I, Technical Bid documents and shall comprise of scanned copy of all pre-qualification/technical information namely;

- i. Letter of Bid in the format prescribed at Section V Form Tech 1.
- ii. Details of Bidder in the format prescribed at Section V Form Tech 2 along with supporting documents;
- iii. Power of Attorney for Signing of Proposal in the format prescribed at Section V Form Tech 6;
- iv. Earnest Money Deposit in the manner and form at Section V Form Tech 7;
- v. Copy of the DD for the cost of Bid Document / Proof of Online Payment

Note: Bidder should not furnish the Financial Bid along with the Technical Bid. A Technical Bid containing any details of Financial Bid shall be declared as non-responsive.

B- Second Electronic Document shall be named as PART – II - Financial Bid document and shall comprise of:

The Price Schedule furnished in the Bid Documents, indicating the prices for Works to be executed under the Contract and are to be provided in the slot provided on the E-Procurement Portal. A specimen of the Financial Bid to be provide in the E-Procurement Portal is prescribed at Form **Fin 1**.

10.2. Price Components

- a) The specimen format for the Financial Bid is provided at Form Tech 11. The Bidder shall make online entries of the rates and prices in line-item total (both in figures and words) for all items of the Works described in the Bill of Quantities along with total bid price (both in figures and words).
- b) Deleted

- c) Deleted
- d) Items for which no rate or price is entered by the Bidder will not be paid for by the Employer when executed and shall be deemed to have covered by the other rates and prices in the Bill of Quantities.
- e) The rates and prices quoted by the Bidder shall be subject to adjustment during the performance of the Contract, if specified in the Bid Data Sheet in accordance with the provisions of Clause 53 of General Conditions of the Contract.
- f) Bids submitted by fax, e-mail or any other electronic modes other than through E-Procurement Portal shall not be entertained and shall be rejected.

11. Bid Currency

- 11.1. The Financial Bid should be quoted by the Bidder in Indian Rupees only. All payments shall be made in Indian Rupees.

12. Earnest Money Deposit (EMD)

- 12.1. The Bidder shall furnish, as part of his Bid, an Earnest Money Deposit (the "EMD") of amount as specified in the Bid Data Sheet.
- 12.2. The EMD may be provided in the form of Demand draft/ Bank Guarantee issued/confirmed by a Scheduled /Nationalised bank, pledged in favour of CEO, UCADA and payable at the Dehradun as specified in the Data Sheet.
- 12.3. The Bank Guarantee should be submitted in the format provided at Form: TECH 17, issued by a Scheduled /Nationalised Bank in India and drawn in favour of and payable at, as specified in the Data Sheet. BG should be irrevocable, non-transferable and unconditional. For the avoidance of doubt, Scheduled Bank shall mean a bank as defined under Section 2(e) of the Reserve Bank of India Act, 1934. The Earnest Money Deposit / Bid security for the Bid shall be valid for 45 days beyond the validity of the Bid, and may be extended as may be mutually agreed between the authority and the Bidder from time to time.
- 12.4. The Bidder should upload the scanned copy of the instruments furnished as EMD in the E-Procurement Portal. Failure to submit such instruments will amount to treat such Bids as non-responsive.
- 12.5. Deleted
- 12.6. Deleted
- 12.7. Any Bid not accompanied by EMD as indicated in Sub-Clauses 12.1 to 12.3 shall be rejected as non-responsive. If bids have been extended, any bid should not be rejected due to validity of EMD.
- 12.8. The Earnest Money Deposit submitted through online or offline modes of payment will be returned without any interest in the following manner:
 - i. To the successful Bidder, within 30 days on receipt of the Performance Security Deposit.
 - ii. To the unsuccessful Bidder, as promptly as possible and in any case not later than 30 (thirty) days after the award of the Contract by the Employer.
 - iii. In the event of rejection of all bids or cancellation of Procurement process by the Employer, within 30 (thirty) days of such rejection or cancellation.

12.9. The EMD shall be forfeited under the following conditions:

- i. if a Bidder withdraws its Bid during the Bid Validity Period specified in this Bid Document or as extended by the mutual consent of the respective Bidder(s) and the Employer; or
- ii. if the Bidder does not accept the correction of the Bid Price, pursuant to ITB Clause 26.3;
- iii. or if the successful Bidder fails or refuses to:
 - a) sign the Contract within the period specified in accordance with ITB Clause 29.6; or
 - b) Furnish Performance Security Deposit in accordance with ITB Clause 30.
- iv. If the bidder breaches any provision of code of integrity.

12.10. The Bid Security of a Joint Venture shall be in the name of the Joint Venture that submits the Bid. If the Joint Venture has not been legally constituted at the time of bidding, the Bid Security shall be in the names of all future partners as named in the letter of intent.

13. Period of Validity of Bids

- 13.1. The Bid shall remain valid for a period of days as specified in Bid Data Sheet from the last date of submission of Bid. The Bidder is not allowed to modify, vary, revoke or withdraw, the Bid during the said original or extended validity period.
- 13.2. In case the last day on which the Bid are to remain valid falls on/subsequently declared a holiday or closed day for the Procuring Entity, the Bid Validity shall automatically deem to be extended to the next working day.
- 13.3. A Bid valid for a shorter period than specified in Clause 13.1 above shall be rejected by the Employer as non-responsive.
- 13.4. In exceptional circumstances prior to the expiration of the Bid validity period, the Employer may solicit the Bidder's consent to an extension of the period of validity for a specified additional period. The request and the responses thereto shall be made in writing (or by e-mail or fax or through E-Procurement Portal or other written records through electronic medium only). A Bidder may refuse the request without forfeiting its Earnest Money Deposit. A Bidder granting the request shall not be required or permitted to modify its Bid.
- 13.5. A Bidder who agrees to the extension of the period of validity of Bids shall also extend the period of validity of the Earnest Money Deposit provided under ITB Clause 12 or submit new EMD to cover the extended period of validity of their bids.

14. Code of Integrity

- 14.1. The Employer and all officers or employees of the Employer, whether involved in the procurement process or otherwise, or Bidders and their representatives or consultants or service providers participating in a procurement process or other persons involved, directly or indirectly in any way in a procurement process shall maintain an unimpeachable standard of integrity.

14.2. Government of Uttarakhand prescribes to the Employer and Bidders to uphold the Code of Integrity, which prohibits officers or employees of Employer or a person participating in a procurement process the following:

- i. any offer, solicitation or acceptance of any bribe, reward or gift or any material benefit, either directly or indirectly, in exchange for an unfair advantage in the procurement process or to otherwise influence the procurement process;
- ii. any omission, including a misrepresentation that misleads or attempts to mislead so as to obtain a financial or other benefit or avoid an obligation;
- iii. any collusion, bid rigging or anti-competitive behaviour to impair the transparency, fairness and progress of the procurement process;
- iv. improper use of information shared between the Employer and the bidders with an intent to gain unfair advantage in the procurement process or for personal gain;
- v. any financial or business transactions between the bidder and any officer or employee of the Employer, who are directly or indirectly related to tender or execution process of contract;
- vi. any coercion including impairing or harming or threatening to do the same, directly or indirectly, to any party or to its property to influence the procurement process;
- vii. any obstruction of any investigation or audit of a procurement process;
- viii. making false declaration or providing false information for participation in –
 - a) tender process or to secure a contract;
 - b) disclosure of Conflict of Interest;
 - c) disclosure by the bidder of any previous transgressions with any entity in India or any other country during the last three years or of any debarment by any other Procuring Entity.

14.3. In case of any breach of the Code of Integrity by a bidder or a prospective bidder, as the case may be, the Employer after giving a reasonable opportunity of being heard, may take appropriate measures including –

- a) exclusion of the bidder from the procurement process;
- b) exclusion of the bidder from the
- c) calling off of pre-contract negotiations and forfeiture or encashment of bid security;
- d) forfeiture or encashment of any other security or bond relating to procurement;
- e) recovery of payments made by the Employer along with interest thereon at bank rate;
- f) cancellation of the relevant contract and recovery of compensation for loss incurred by the Employer;
- g) debarment of the bidder from participation in any future procurements of any Procuring Entity for a period of two years

D. Online Submission of Bids

15. Format and Signing of Bid

- 15.1. The Bidder shall provide all the required information sought under this Bid Document. The Employer will evaluate only those Bids that are received in the required formats and complete in all respects. Incomplete and/or conditional/ alternative Bids shall be liable to rejection as non-responsive.
- 15.2. All the documents of the Bid should be uploaded on the E-Procurement Portal www.uktenders.gov.in using digital signature with their valid Digital Signature Certificate (DSC) in the form of smart card/e-token. The DSC can be obtained from any authorised certifying agencies. The Bidder should register in the web site www.uktenders.gov.in using the relevant option available. Then the Digital signature registration had to be done with thee-token, after logging into the site. The bidder can login the site through secured login by entering the password of the e-token and the user id/password chosen during registration.
- 15.3. The documents to be uploaded shall be typed or written in indelible ink and signed by the Authorized Signatory (the "Authorized Signatory") of the Bidder who shall also initial each page, in blue/black ink with stamp as an acceptance of the terms and conditions written therein. The person signing the submissions shall initial all the alterations, omissions, additions, or any other amendments made to the submissions. The submissions must be properly signed by the Authorized signatory of the Bidder holding a Power of Attorney or the Board Resolution in this regard.
- 15.4. A copy of the Power of Attorney certified by the authorized signatory of the Bidder in the form specified in Form Tech 6, as the case may be, should accompany the Bids.
- 15.5. The Bidder shall submit through E-Procurement Portal two separate files. First Electronic Document – Part 1-Technical Bid documents and the Second Electronic Document – Part 2- Financial Bid document as specified in Clause 10.1 above. After submission of Bids, the system would generate a unique bid identification number which is time stamped. This shall be treated as acknowledgment of Bid submission.
- 15.6. Instructions for e-tendering is specified in E-Procurement Portal of www.uktenders.gov.in. The Bidder must acquaint and train themselves with the rules, regulations, procedure and implied conditions/agreement of the respective Uttarakhand Departments' portal. The Bidder shall settle clarifications and disputes if any, regarding the E-Procurement Portal directly with E-Procurement Portal helpdesk. The Bidder shall be responsible to see the E-Procurement Portal till last date of submission of Bid for any clarification/amendment which shall be part of the Bid Document. Employer will not owe the responsibility for any technical issue, if any, for the submission of the proposal.
- 15.7. A bid submitted by a Joint Venture shall be signed so as to be legally binding on all partners.

16. Deadline for Submission of Bids

- 16.1. It shall be the responsibility of the Bidder to ensure that their Bid is submitted in the E-Procurement Portal within the last date and time specified for the receipt of Bids in complete manner. The Employer will not be held responsible for technical glitches and internet connectivity issues confronted by Bidder in uploading their Bid or for any failure on part of the Bidder to make the payment of EMD or submission of any documents as required to be submitted or for rejection of Bids by E-Procurement Portal for whatsoever reasons. No correspondence shall be entertained in this regard.

- 16.2. The last date and time for submission of Bids may be extended by amending the Bid Documents in accordance with ITB Clause 6 after giving adequate notice on the E-Procurement Portal, in which case all rights and obligations of the Employer and Bidder previously subject to the deadline will thereafter be subject to the deadline as extended. Information about extension of the deadline for the submission of Bids will be published on E-Procurement Portal.

17. Late Bids

- 17.1. The E-Procurement Portal will not accept any Bids after the last date and time for submission of Bids.

18. Modification and Withdrawal of Bids

- 18.1. The Bidder may modify the contents of the Technical Bid or Financial Bid or withdraw its Bid by uploading their request prior to deadline for submission of Bids in E-Procurement Portal. The last modified Bid submitted by the Bidder within the last date and time for submission of Bids shall be considered as the Bid. The Bidders may withdraw his bid by uploading their request before the last date and time of submission of Bids. However, if the Bid is withdrawn, the re-submission of the Bid is not allowed.
- 18.2. No Bid may be withdrawn in the interval between the deadline for submission of Bids and the expiration of the original Bid Validity Period or extended period in pursuant to Clause 13. Withdrawal of a Bid during this interval shall result in forfeiture of the Bidder's Earnest Money Deposit.

E. Bid Opening and Evaluation of Bids

19. Opening of Technical Bid

- 19.1. The file containing Technical Bid Document shall be opened first in the E-Procurement Portal at the designated date and time. Authorised representatives of Bidder, who intend to attend the Technical Bid opening are to bring with them letters of authority/power of attorney from the corresponding Bidder. In the event of the specified date of Technical Bid opening being declared a holiday, the Technical Bid shall be opened at the appointed time on the next working day.
- 19.2. List of submitted Bids termed as RECEIVED shall be displayed in E-Procurement Portal. All Bid payments including EMD] and cost of bid document successfully received shall be displayed. Thereafter the names and such other details of the Bidder shall be published in the E-Procurement Portal.

20. Process to be Confidential

- 20.1. The Employer shall ensure the confidentiality of the process of Bid evaluation until orders on the Bids are passed.
- 20.2. Information relating to the examination, clarification, evaluation and comparison of Bids and recommendations of award of Contract shall not be disclosed to a Bidder or any other persons not officially concerned with such process until award of the successful Bidder is announced in the E-Procurement Portal. Any effort by a Bidder to influence, the Employer in processing of Bids or award decision may result in rejection of its Bid.

21. Clarification of Bids

- 21.1. During evaluation of Bids, the Employer or the Bid Scrutiny Committee, may at its discretion, seek bonafide clarifications in writing from the Bidders relating to the Bids submitted by them by a specific date. The Bidders may be requested to submit necessary information or documents which are historical in nature (which exist on the last date of the submission of the Bid), like audited statements of accounts, tax clearance certificate, PAN, etc. If the Bidder does not comply or respond by the specified date, their Bid shall be liable to be rejected and this shall be legally acceptable and binding to all the bidders.
- 21.2. The Employer shall not offer or permit any change in the price or substance of a Bid except to confirm the correction of arithmetic errors discovered by the Bid Scrutiny Committee in the evaluation of the Financial Bids. In case of confusion between digit and words, words shall be preferred for evaluation purpose.
- 21.3. No substantive change to qualification information or to a submission, including changes aimed at making an unqualified bidder, qualified or an unresponsive submission, responsive shall be sought, offered or permitted under any circumstances.
- 21.4. All communication generated as above shall be included in the record of the procurement proceedings.

22. Initial Examination of Bids

- 22.1. The Employer shall cause preliminary examination of the Bids submitted to determine their substantial responsiveness and following factors shall be considered, namely:
 - i. Whether the Bidder meets the eligibility criteria laid down in the Bid Documents;
 - ii. Whether the crucial documents have been duly signed and submitted;
 - iii. Whether the requisite Earnest Money Deposit has been furnished;
 - iv. Whether the Bid is substantially responsive in terms of the Bid Documents without material deviation or reservation or inconsistent with the Employer's right or tenderer's obligations under the Contract.

For the avoidance of doubt, a substantially responsive technical Bid is one that meets the requirements of the Bidding Document without material deviation, reservation, or omission. A material deviation, reservation, or omission is one that,

- a) If accepted, would
 - i. affect in any substantial way the scope, quality, or performance of the Works, and Materials and Plants incorporated therein as specified in Works Requirement; or
 - ii. limits in any substantial way, inconsistent with the Bidding Document, the Employer's rights or the Bidder's obligations under the Contract to be executed.
- b) if rectified, would unfairly affect the competitive position of other Bidders presenting substantially responsive technical Bids.
- c) During the evaluation of Bids, the following definitions apply:
 - i. "Deviation" is a departure from the requirements specified in the Bidding Document;

- ii. "Reservation" is the setting of limiting conditions or withholding from complete acceptance of the requirements specified in the Bidding Document; and
 - iii. "Omission" is the failure to submit part or all of the information or documentation required in the Bidding Document.
- 22.2. Bids which on initial examination are found not to be substantially responsive under any of the Clauses under Clause 21.1 above, shall be rejected. The decision shall be legally binding and acceptable to the bidders in this regard.
- 22.3. Deleted
- 22.4. The Procuring Entity/ Bid Scrutiny Committee may waive any minor infirmity or non-conformity or irregularity in a Bid which does not constitute a material deviation, reservation or omission provided such a waiver does not prejudice or affect the relative ranking of any Bidder.

23. Correction of Errors

- 23.1. Bids determined to be substantially responsive will be checked by the Bid Scrutiny Committee for any arithmetic errors. Errors will be corrected by the Bid Scrutiny Committee as follows:
- a. where there is a discrepancy between the rates in figures and in words, the amount in words will prevail; and
 - b. where there is a discrepancy between the unit rate and the line-item total resulting from multiplying the unit rate by the quantity, the unit rate as quoted will govern.
- 23.2. The amount stated in the Bid will be adjusted by the Employer in accordance with the above procedure for the correction of errors and, shall be considered as binding upon the Bidder. If the Bidder does not accept the corrected amount the Bid will be rejected, and the earnest money deposit may be forfeited in accordance with Sub-Clause 12.10.

24. Evaluation of Technical Bid

- 24.1. The Procuring Entity may constitute a Bid Scrutiny Committee as it deems fit to carry out scrutiny and evaluation of Bids strictly in accordance with the evaluation criteria indicated in Section IV of this Bid Document.
- 24.2. Bidder whose Technical Bids are adjudged as responsive in terms of Clause 21 and who fulfils the conditions of eligibility and qualification in terms with Section IV will be declared as qualified Bidder (**"Qualified Bidder"**). If a Bidder does not fulfil the eligibility and qualification criteria prescribed as above, such a Bidder shall be disqualified. The Financial Bids of only the Qualified Bidders shall be considered for opening in the E-Procurement Portal and further evaluation in the manner set out in Clause 25 below.
- 24.3. The list of Qualified Bidders and the date, time of opening of Financial Bids of Qualified Bidders shall be published by the Procuring Entity in the E-Procurement Portal.

25. Opening and Evaluation of Financial Bid

- 25.1. The Financial Bids of all the Qualified Bidders will be opened in the E-Procurement Portal at the designated date and time notified. Authorised representatives of the Bidders, who intend to attend the Financial Bid opening are to bring with them letters of authority from the corresponding Bidders. If the specified date of Financial Bid opening is declared a holiday subsequently the Financial Bids shall be opened at the appointed time on the next working day.

26. Evaluation and Comparison of Bids

- 26.1. The Employer/ Bid Scrutiny Committee shall compare the evaluated prices of all substantially responsive bids established in accordance with this Bid Document to determine the lowest evaluated bid. By applying the criteria and methodologies the Employer shall determine the Most Advantageous Bid. This is the Bid that meets the Qualification Criteria and has been determined to be:
- a. substantially responsive to the Bid document, and
 - b. the lowest evaluated cost.
- 26.2. Deleted
- 26.3. Deleted
- 26.4. The Employer reserves the right to reject any variation, deviation, oral alternative offer unless otherwise specified in the Bid Data Sheet.
- 26.5. The estimated effect of the price adjustment conditions, if any under Clause 53 of the General Conditions of Contract, during the implementation of the Contract, will not be taken into account in bid Evaluation.
- 26.6. If the bid of the successful bidder is seriously unbalanced or front loaded in relation to the Employer's estimate of the cost of the work to be performed under the contract, the Employer may require the Bidder to produce detailed price analyses for any or all items of the Bill of Quantities, to demonstrate the internal consistency of those prices with the construction methods and schedule proposed. After evaluation of the price analyses, the Employer may require that the amount of the performance security deposit set forth in Clause 30 be increased at the expense of the successful Bidder to a level sufficient to protect the Employer against financial loss in the event of default of the successful under the contract.
- 26.7. The evaluation of Bid and award of Contract shall be completed, as far as possible, within the period for which the Bids are held valid. The Employer shall seek extensions of the validity of Bidder as per the rules from the Bidder for the completion of evaluation. In case the evaluation of Bids and award of Contract is not completed within this extended period, all the Bids shall be deemed to have become invalid and fresh Bids may be called for.

F. Award of Contract

27. Preparation of evaluation report

- 27.1. The detailed evaluation report shall be prepared in accordance with the eligibility and qualification criteria, which shall be considered by the Procuring Entity for taking a final decision on the Bid.
- 27.2. After evaluation of the Bids, simultaneously with the issuance of LoA under ITB Clause 29, the Employer shall publish the contract award notice on the E-Procurement Portal which shall contain, at a minimum, the following information:
- a) name and address of the Employer;
 - b) name and reference number of the contract being awarded, and the selection method used;
 - c) names of all Bidders that submitted Bids, and their Bid prices as read out at Bid opening, and as evaluated;
 - d) names of all Bidders whose Bids were rejected either as nonresponsive or as not meeting the Eligibility and Qualification Criteria, or were not evaluated, with the reasons therefor; and
 - e) the name of the successful Bidder, the final total Contract Price, the contract duration and a summary of its scope.

28. Employer's right to vary Quantities at the Time of Award

- 28.1. The Employer reserves the right to increase or decrease by up to 10 percent of the quantity of works originally specified in the Schedule of Requirements without any change in the rate or other terms and conditions.

29. Notification of Award and Signing of Contract

- 29.1. Subject to ITB Clause 26.1 above, the Contract will be awarded to the successful Bidder whose Bid has been determined to be substantially responsive and has been determined as the lowest evaluated Bid, provided further that the Bidder is determined to be qualified to perform the Contract satisfactorily.
- 29.2. The Bidder whose Bid has been accepted will be notified by the Employer by issuing the Letter of Award (LOA) prior to expiration of the Bid validity period through the E-Procurement Portal and through email to the successful Bidder specifying the sum that the Employer will pay the Bidder in consideration of the execution of Works as prescribed by the Contract (hereinafter and in the Contract called the "Contract Price"). The Bidder, shall within 03 days confirm acceptance by returning a signed copy of the Letter of Acceptance through email.
- 29.3. Until a formal Contract is prepared and executed, the Letter of Acceptance shall constitute a binding Contract and the contract shall commence the work based on the LoA.
- 29.4. Before issuing such LOA, the Employer may, at its discretion, ask the Successful Bidder to submit the originals of all such documents for verification whose scanned copies were submitted in E-Procurement Portal along with the Technical Bid. If the Bidder fails to provide originals or if there are any substantive discrepancies between such documents, the same shall be considered as violation of Code of Integrity including misleading the Employer and action shall be initiated to debar such Bidder in accordance with Section V.

- 29.5. Upon the successful Bidder's furnishing of Performance Security Deposit pursuant to ITB Clause 30, the Employer shall send the Contract Form to the successful Bidder.
- 29.6. Within Fourteen (14) days of receipt of the Contract Form, the successful Bidder shall sign, date, and return it to the Employer.

30. Performance Security Deposit

- 30.1. Within the timeframe specified in the Data Sheet, the successful Bidder shall furnish the Performance Security Deposit plus additional performance security for unbalanced Bids in accordance with Clause 26.6 of ITB and Clause 59 of the General Conditions of Contract, in the form of Demand Draft/ Bank Guarantee issued by a Scheduled Bank in India or through online payment in an acceptable form to the Purchaser, safeguarding the Purchaser's interest in all respects.
- 30.2. Failure of the successful Bidder to comply with the requirement of ITB Clause 29.6 and/or ITB Clause 30.1 shall constitute sufficient grounds for the annulment of the award and forfeiture of the Earnest Money Deposit. In such a case the Procuring Entity shall go for re-tendering.

31. Deleted

SECTION III - BID DATA SHEET

The following specific data for the goods and related services to be procured shall complement, supplement, or amend the provisions in the Instructions to Bidders (ITB). Whenever there is a conflict, the provisions herein shall prevail over those in ITB.

ITB Para Reference	Particulars
	A. General
NIB 1	The reference number of the Notice Inviting Bids (NIB) is: 1581/UCADA/AWOS/2025 – 2 nd Call The Employer is: Chief Executive Officer, UCADA
ITB 3.2	JV is not allowed
ITB 5.2	Demand Draft towards cost of Bid Document for an amount of Rs. ₹4500 (inclusive of taxes) in favour of Chief Executive Officer, UCADA along with the Bid in the manner set out in this Bid Document.
	B. Bidding Documents
ITB 7.1	The Employer's address for the purpose of any clarification is: [Uttarakhand Civil Aviation Development Authority (UCADA) Sahastradhara Heliport, Mussoorie by pass, P.O. kulhan Dehradun-248001, Uttarakhand (India) Requests for clarification should be received by the Employer prior to the pre-bid meeting date
ITB 7.2	Pre-Bid Meeting shall be scheduled: E-mail: ucadadoon@gmail.com Venue: Online Time and Date: 08-09-2025 at 1200Hrs Link for Participation: https://meet.google.com/rfc-pved-qht
	C. Preparation of Bids
ITB 12.1	The amount of EMD is Rs. 8,60,400
ITB 12.2, 12.3	EMD/Bank Guarantee shall be in favour of CEO, UCADA payable at Dehradun.
ITB 13.1	The bid validity period shall be 180 days after the deadline for bid submission
	D. Submission and Opening of Bids
	E. Bid Opening and Evaluation of Bids
ITB 30.1	Performance security Deposit shall be furnished by the Selected Bidder 07 days from the date of the receipt of LOA from the authority.

SECTION IV: ELIGIBILITY AND QUALIFICATION CRITERIA

32. Eligible Bidder

32.1. For determining the eligibility of Bidder, the following conditions are to be satisfied:

- a) The Bidder should not be under order of debarment or removed from empanelled/registered list by any Employer from participating in a Bid, as on the last date of submission of Bids.
- b) Any contract of the Bidder should not have been terminated during the last 36 months from the last date of submission due to non-fulfilment of contractual obligations as evidenced by imposition of a penalty by any Employer or by an arbitral or judicial authority or a judicial pronouncement or arbitration award against the Bidder.
- c) Bidder should not be associated, or have been associated in the past, directly or indirectly, with a firm or any of its affiliates which have been engaged by the Employer to provide consulting services for the preparation of the design, specifications, and other documents to be used for the procurement of the Works to be executed under this Notice Inviting Bids.
- d) A Bidder shall not have a conflict of interest as specified in Uttarakhand Procurement Rules, as amended from time to time
- e) Deleted
- f) Deleted
- g) Bidder must neither be insolvent, in receivership, bankrupt or being wound up, nor shall have its affairs administered by a Court or Judicial Officer or, its business activities suspended and must not be the subject of legal proceeding for any of these reasons.
- h) The Bidder should not have, and their directors and officers do not have, been convicted of any criminal offence related to their professional conduct or the making of false statements or misrepresentations as to their qualifications to enter a procurement contract within a period of three years preceding the last date of submission, or not have been otherwise disqualified pursuant to debarment proceedings.

32.2. The Bidder should have the following:

- a) Registration under the applicable law for establishing their legal business identity.
- b) Active Registration under the Goods and Service Tax (GST) Act.
- c) Permanent Account Number (PAN) issued by the Board of Direct Taxes under the Income Tax Act, 1961.
- d) Registration with Employees Provident Fund Organisation under EPF and Miscellaneous Provisions Act, 1952.

33. Qualification Criteria

33.1. Evaluation of the Bidder's Bid will include an assessment of the Bidder's capacity to mobilize key personnel and equipment for the contract consistent with its proposal

regarding work methods, scheduling, and material sourcing in sufficient detail and fully in accordance with the requirements stipulated in **Section VI**. Such an evaluation shall be based on the qualification criteria listed below.

The Bidder should demonstrate that they fulfil the following qualification criteria (the **"Qualification Criteria"**). A. Qualification Criteria:

- a) The Bidder should have achieved a minimum average annual financial turnover (based on financial statement) over the last 05 financial years (2020-21, 2021-22, 2022-23, 2023-24 & 2024-25 amounting to 2,15,10,000.
 - b) The Bidder should have Experience of 'similar contracts' in the role of contractor for at least the last 05 years prior to the bid submission deadline for any State/Centre/UT Govt. department.
 - c) The Bidder should have satisfactorily completed at least 01 similar work of at least 80% of the contract value, as a prime contractor or at least 02 similar works of value not less than 50% of estimated value of contract within the last 60 (sixty) months from the last date of submission. The similar work shall be mean "works related to installation/commissioning of AWOS or Ceilometer". Works executed as non-prime/sub-letting works shall not be considered for evaluation.
 - d) The Bidder must be a profit-making entity for the last 05 financial years (2020-21, 2021-22, 2022-23, 2023-24 & 2024-25.
 - e) The bidder shall submit the MAF for all the major components of both AWOS and ceilometer in the technical bid.
- 33.2. The Bidder should fulfil all the criteria detailed in section IV to qualify in the Technical Bid. If a Bidder does not fulfil the minimum criteria prescribed herein, the Bidder shall be disqualified. On such disqualification the Financial Bid of such Bidder will not be opened & will not be considered for further evaluation.
- 33.3. Though the Bidder fulfils the above conditions, they are subject to be disqualified if they have;
- made any misleading or false representation in the forms, statements, any attachments in proof of the requirements specified in the eligibility or qualification criteria.
 - record of poor performance such as abandoning the works, not properly completing the contract, inordinate delays in completion, litigation history, or financial failures etc.

SECTION V: FORMATS FOR SUBMISSION OF BIDS

Form Tech 1: Letter of Bid

(To be uploaded in the letter head of the Bidder)

Dated: [insert date (as day, month and year) of Bid Submission]

Bid Reference No.

To
CEO,
UACDA,
Dehradun.

Sub: Bid for [Description of Work]

1. We, the undersigned, hereby submit our Bid, in two parts under Single Stage Two Envelop bidding process, namely: (a) the Technical Part: Technical Bid, and (b) the Financial Part: Price Bid.
2. With reference to your Bid document dated _____ I/We, having examined the Bid Documents have no reservations to the Bid Documents, including Addenda issued in accordance with Instructions to Bidders (ITB 6.1).
3. We offer to supply in conformity with the Bidding Document and in accordance with the Works Requirements, the Works under the Package / Contract Title: [...name of Work] for [...Name of the Project...] against NIB reference [...].
4. We have bid as a joint venture permitted as per Clause 3.2 of Bidding Document, and we declare and confirm that all partners of the joint venture shall be liable jointly and severally for the execution of the contract in accordance with the contract terms, in the event of award on us. [applicable only if the Bidder is a Joint Venture if so permitted to bid as per Bidding Document].
5. We undertake, if our Bid is accepted, to execute the Works in accordance with the Bid Document and as per the Works Requirements.
6. We certify that all information provided in the Bid submitted by us are true and correct; nothing has been omitted which renders such information misleading; and all documents accompanying the Bid are true copies of their respective originals.
7. I/We shall make available to the Employer any additional information/clarification it may find necessary or require to supplement or authenticate the Bid.
8. I/We acknowledge the right of the Employer to reject our Bid without assigning any reason or otherwise and hereby waive, to the fullest extent permitted by applicable law, our right to challenge the same on any account whatsoever.
9. I/We declare that in the preceding 36 months from last date of submission, we have neither failed to perform on any contract, as evidenced by imposition of a penalty by any Procuring Entity/Employer or by an arbitral or judicial authority or a judicial pronouncement or arbitration award, nor been expelled from any service or contract

by any public authority nor have any contract terminated by any Procuring Entity/Employer for breach on our part.

10. We declare that we will abide by the 'Code of Integrity of Public Procurement'. In case of transgression, our names are likely to be deleted from the list of registered contractors, besides any other penalty or more severe action as deemed fit that may be imposed by the Procuring Entity/Employer.
11. We/our firm understand that this Bid, together with your written acceptance thereof included in your Letter of Acceptance, shall constitute a binding contract between us, until a formal contract is prepared and executed.
12. I/We understand that you may cancel the selection process at any time and that you are neither bound to accept any Bid that you may receive nor to invite the Bidders to Bid for the Works.
13. I/We believe that we satisfy the Eligibility Criteria and Qualification Criteria and meet(s) the requirements as specified in the Bid Document.
14. I/we certify that, we have not been convicted by a Court of Law or indicted or adverse orders passed by a regulatory authority which could cast a doubt on our ability to undertake the Service or which relates to a grave offence that outrages the moral sense of the community.
15. In the event of us being declared as the Successful Bidder, I/we agree to enter into a Contract in accordance with the draft that has been provided by the Employer. We agree not to seek any changes in the aforesaid draft Contract and agree to abide by the same.
16. I/We have studied all the Bid Documents carefully and also understand the Works required to be executed. We understand that except to the extent as expressly set forth in the draft Contract, we shall have no claim, right or title arising out of any documents or information provided to us by the Employer or in respect of any matter arising out of or relating to the selection process including the award of the Contract.
17. I/We offer an Earnest Money Deposit of [Rs. /-] (Rupees Only) and Cost of bid documents Rs. [] (Rupees Only) (if applicable) for the Works for which we have submitted the Bid (s) in accordance with the Bid Document.
18. The documents comprising the Bid, as specified in Clause 10.1 of the Bid Document, have been submitted in the manner set out in the Bid Document.
19. Rates/Price, has/have been quoted by me/us in the FIN 1, after taking into consideration all the terms and conditions stated in the Bid Document, draft Contract, our own estimates of costs and revenues and after a careful assessment of the Works to be executed and all the conditions that may affect the execution of Work.
20. I/We certify that I/We have not been debarred or removed from empanelled/registered list by the Procuring Entity, State Government or any entity controlled by it, from participating in any Bid, for indulging in violation of Code of Integrity or deficiencies of services or for indulging in unfair trade practices or for any other reasons as on the last date for submission of Bids.

21. I / we hereby offer and agree to execute the Work in conformity with the Bid Document and in accordance with the Works Requirement.
22. We agree to abide by this bid for the Bid validity period specified in Clause 13.1 of the ITB and it shall remain binding upon us and may be accepted at any time before the expiration of that period.
23. I/we confirm that our Financial Bid is unconditional and that we accept all terms and conditions specified in the Bid Document.
24. Until a formal Contract is prepared and executed, this bid, together with your written acceptance thereof and your notification of award, shall constitute a binding Contract between us.
25. I/We confirm that if I/We are the successful Bidder shall within [07] days of the receipt of LOA from the Employer, furnish the Performance Security and Additional Performance Security in accordance with the Conditions of Contract.
26. I/We understand that you are not bound to accept the lowest or any Bid you may receive.
27. I/We agree to abide by all the terms and conditions of the tender documents
28. I / we agree to be bound by this offer if we are the Successful Bidder for the aforementioned Service.

In witness thereof, I/we submit this Bid under and in accordance with the terms of the Bid document.

Yours Faithfully,

Date: (Signature of the Authorised Signatory)

Place:

Name and Seal of Bidder

Form Tech 2: Details of the Bidder

(To be uploaded in the letter head of the Bidder)

1. General Details

- a) Name:
- b) Bidder's Constitution or Legal Status:[attach copy of constitution document such as Certificate of Incorporation for Companies, Article and Memorandum of Association, Registered Partnership Deed for Partnership firms, etc.]
- c) [Corporate Identity Number/ Registration Number]
- d) Bidder's Registration Status as approved Contractor:[provide details of registering authority, class of registration, and its validity. [attach Registration Certificate(s)]]
- e) Address of the office/corporate headquarters and its branch office(s), if any, in India:
- f) Address of the office/ corporate headquarters or its branch office(s), in Uttarakhand:

2. Bank Details

- a) Name of the Holder
- b) Bank Account No.
- c) Name of the Bank
- d) Branch Name
- e) IFSC Code

3. Brief description of the Bidder including details of its main lines of business and proposed role and responsibilities in these Services:

4. Details of individual(s) who will serve as the point of contact/communication for the Employer:

- a) Name:
- b) Designation:
- c) Company:
- d) Address:
- e) Telephone Number:
- f) E-Mail Address:
- g) Fax Number:
- h) Mobile:

5. Particulars of the Authorised Signatory of the Bidder:

- a) Name:
- b) Designation:
- c) Company:

- d) Address:
- e) Telephone Number:
- f) E-Mail Address:
- g) Fax Number:
- h) Mobile:

6. Taxation Registrations:

- a) PAN number:
- b) Type of GST Registration as per the Act (Normal Taxpayer, Composition, Casual Taxable Person, SEZ, etc.):
GSTIN number.....in Consignor and Consignee States

7. The following information shall also be provided:

SN	Criteria	Yes	No
1.	Has the Bidder been barred by Procuring Entity/ State Government, or any entity controlled by it, from participating in any Bid.		
2.	If the answer to 1 is yes, does the bar subsist as on the date of submission of the Bid.		
3.	If the answer to 1 is no, the Bidder are required to furnish Self-Declared Certificate in their letter head to substantiate the same.		
4.	Whether the Bidder belongs to a country which shares Land Border with India. The Bidder are required to furnish an undertaking in the prescribed format at Form Tech 16 in their letter head to substantiate the same.		

8. A statement by the Bidder disclosing material non-performance or contractual non-compliance in past Assignment, contractual disputes and litigation/ arbitration during the last 60 (sixty) months from the last date of submission recent past is given below (Attach extra sheets, if necessary).

Year	Name of Work/ Assignment	Name of the Employer with contact details	Contact no and date	Value of contract	Date completed	Nature of litigation	Final Award

I / We confirm that all the registrations submitted are under operation presently and shall be used for all related activities.

Note: Bidder shall fill in this Form in the format provided above. No alterations to its format shall be permitted, and no substitutions shall be accepted.

SIGNATURE OF BIDDER WITH DATE AND OFFICIAL SEAL

(Name and Designation)

Duly authorized to sign the Bid on behalf of (Name & address of the Bidder and Seal of the [Company])

Form Tech 3- Annual Financial Turnover & Net-worth

*(Refer to Section IV of the Bid Document)
(To be submitted on the Letterhead of the Statutory Auditor)*

We have verified the relevant statutory and other records of M/s [Name of the Bidder], and certify that the Annual Turnover for the last five completed financial Year is as follows:

Annual Financial Turnover (Rs Cr.)				
2020-21	2021-22	2022-23	2023-24	2024-25

Average Turnover_____ (in cr)

This certificate is being issued to be produced before [Name of the Employer], for the ["Procurement of Works for "].

UDIN No:

Place:

Date

Signature and Seal of the Statutory Auditor clearly indicating his/her membership number as well as UDIN number

Instructions:

1. The Bidder should provide details of its own Financial Turnover duly certified by its Statutory Auditor.
2. Annual Turnover = Annual Income as indicated in the audited annual financial statement
3. The Bidder should furnish the supporting documentary proofs along with the Certificate from Statutory Auditor in the above format. Copy of the audited financial statements with audited report, balance sheet, Profit & Loss account with all enclosures for each for the last 5 financial years should be attached certified by a Statutory Auditor.
4. In case the Bidder is registered outside India, the financial capacity as certified by the statutory auditor residing outside India may be submitted. However, for conversion of US Dollars to Rupees, the rate of conversion shall be the rate prevailing as on the date of issue of Bid Document. In the case of any other currency, the same shall first be converted to US Dollars as on the date of issue of Bid Document, and the amount so derived in US Dollars shall be converted into Rupees at the aforesaid rate. The conversion rate of such currencies shall be the daily representative exchange rates published by the International Monetary Fund for the relevant date.

Form Tech 4- Profit in last 05 Years

*(Refer to Section IV of the Bid Document)
(To be submitted on the Letterhead of the Statutory Auditor)*

We have verified the relevant statutory and other records of M/s [Name of the Bidder], and certify that the Profit for the last five completed financial Year is as follows:

2020-21	2021-22	2022-23	2023-24	2024-25

This certificate is being issued to be produced before [Name of the Employer], for the ["Procurement of Works for "].

Place:

Date

Signature and Seal of the Statutory Auditor clearly indicating his/her membership number as well as UDIN number

Form Tech 5: Satisfactory Completion of Similar Contracts

(To be uploaded in the letter head of the Bidder)

(Refer Section IV of the Bid Document)

Name of Bidder:

SN	Name of Employer	Brief Description of Work	Contract No.	Date of Issue of Work Order / Contract	Value of Contract (Rs.)	Stipulated period of Completion of Work	Actual date of completion	Remarks explaining reasons for delay, if any

Note: Attach Completion or work in progress (% of work completed) Certificate issued by Competent Authority of Employer (Not below the rank of E.E. or equivalent)

Form Tech 6: Format for Evidence of Access to or Availability of Credit Facilities

(To be submitted on the Letterhead of the Bank)

This is to certify that M/s. is a reputed company with a good financial standing. If the contract for the work, namely, is awarded to the above firm, we shall be able to provide overdraft/credit facilities to the extent of Rs. to meet their working capital requirements for executing the above contract.

Signature of Senior Bank Manager

Name of the Senior Bank Manager

Address of the Bank

Stamp of the Bank

Note: Certificate should not be more than one month old.

Form Tech 7 Power of Attorney for Signing of Bid

(To be submitted on 100 rupees Non-Judicial Stamp Paper)

Know all men by these presents, We, _____ (name of the firm and address of the registered office) do hereby irrevocably constitute, nominate, appoint and authorise Mr. / Ms. (Name), son/daughter/wife of [] and presently residing at _____, who is [presently employed with us and holding the position of _____], as our true and lawful attorney (hereinafter referred to as the "Attorney") to do in our name and on our behalf, all such acts, deeds and things as are necessary or required in connection with or incidental to submission of our "Bid for Procurement of Works for _____", proposed by the [Name of the Employer] (the "Employer") including but not limited to signing and submission of all applications, Bids and other documents and writings, participate in Bidder's and other conferences and providing information/responses to the Employer, representing us in all matters before the Employer, signing and execution of all contracts including the Contract and undertakings consequent to acceptance of our Bid, and generally dealing with the Employer in all matters in connection with or relating to or arising out of our Bid for the said Service and/or upon award thereof to us and/or till the entering into the Contract with the Employer.

AND we hereby agree to ratify and confirm and do hereby ratify and confirm all acts, deeds and things lawfully done or caused to be done by our said Attorney pursuant to and in exercise of the powers conferred by this Power of Attorney and that all acts, deeds and things done by our said Attorney in exercise of the powers hereby conferred shall and shall always be deemed to have been done by us.

IN WITNESS WHEREOF WE, _____, THE ABOVE-NAMED PRINCIPAL HAVE EXECUTED THIS POWER OF ATTORNEY ON THIS _____ DAY OF _____, 20**.

For

(Signature) (Name, Title and Address)

Witnesses:

Accepted

[Notarised] (Signature)

(Name, Title and Address of the Attorney)

Notes:

- a) *The mode of execution of the Power of Attorney should be in accordance with the procedure, if any, laid down by the applicable law and the charter documents of the executant(s) and when it is so required, the same should be under common seal affixed in accordance with the required procedure.*

- b) Also, wherever required, the Bidder should submit for verification the extract of the charter documents and documents such as aboard or shareholders' resolution/power of attorney in favour of the person executing this Power of Attorney for the delegation of power hereunder on behalf of the Bidder.*
- c) For a Power of Attorney executed and issued overseas, the document will also have to be legalised by the Indian Embassy and notarised in the jurisdiction where the Power of Attorney is being issued. However, the Power of Attorney provided by Bidder from countries that have signed the Hague Legislation Convention, 1961 are not required to be legalised by the Indian Embassy if it carries a conforming Apostille certificate.*

Form Tech 8 Earnest Money Deposit Bank Guarantee for EMD
(Refer Clause 12 of the Bid Document)

B.G. No.

Dated:

1. In consideration of you, *****, having its office at *****, (hereinafter referred to as the "Employer", which expression shall unless it be repugnant to the subject or context thereof include its, successors and assigns) having agreed to receive the Bid of..... (a registered under the ,) and having its registered office at (hereinafter referred to as the "Bidder" which expression shall unless it be repugnant to the subject or context thereof include its/their executors, administrators, successors and assigns), for (hereinafter referred to as "the Works") pursuant to the Bid Document dated.....issued in respect of the Works and other related documents including without limitation the draft Contract (hereinafter collectively referred to as "Bid Documents"), we (Name of the Bank) having our registered office at..... and one of its branches at.....(hereinafter referred to as the "Bank"), at the request of the Bidder, do hereby in terms of Clause 12.3 of the Bid Document, irrevocably, unconditionally and without reservation guarantee the due and faithful fulfilment and compliance of the terms and conditions of the Bid Documents by the said Bidder and unconditionally and irrevocably undertake to pay forthwith to the Employer an amount of Rs. ***** (Rupees ***** only) (hereinafter referred to as the "Guarantee") as our primary obligation without any demur, reservation, recourse, contest or protest and without reference to the Bidder if the Bidder shall fail to fulfil or comply with all or any of the terms and conditions contained in the said Bid Documents.
2. Any such written demand made by the Employer stating that the Bidder is in default of the due and faithful fulfilment and compliance with the terms and conditions contained in the Bid Documents shall be final, conclusive and binding on the Bank.
3. We, the Bank, do hereby irrevocably, unconditionally and on non-transferable basis undertake to pay the amounts due and payable under this Guarantee without any demur, reservation, recourse, contest or protest and without any reference to the Bidder or any other person and irrespective of whether the claim of the Employer is disputed by the Bidder or not, merely on the first demand from the Employer stating that the amount claimed is due to the Employer by reason of failure of the Bidder to fulfil and comply with the terms and conditions contained in the Bid Documents including failure of the said Bidder to keep its Bid open during the Bid validity period as set forth in the said Bid Documents for any reason whatsoever. Any such demand made on the Bank shall be conclusive as regards amount due and payable by the Bank under this Guarantee. However, our liability under this Guarantee shall be restricted to an amount not exceeding Rs. ***** (Rupees ***** only).
4. This Guarantee shall be irrevocable and remain in full force for a period of 45 (forty five) days beyond the validity of the Bid or for such extended period as may be mutually agreed between the Employer and the Bidder, and agreed to by the Bank,

and shall continue to be enforceable till all amounts under this Guarantee have been paid.

5. We, the Bank, further agree that the Employer shall be the sole judge to decide as to whether the Bidder is in default of due and faithful fulfilment and compliance with the terms and conditions contained in the Bid Documents including, inter alia, the failure of the Bidder to keep its Bid open during the Bid validity period set forth in the said Bid Documents, and the decision of the Employer that the Bidder is in default as aforesaid shall be final and binding on us, notwithstanding any differences between the Employer and the Bidder or any dispute pending before any Court, Tribunal, Arbitrator or any other Employer.
6. The Guarantee shall not be affected by any change in the constitution or winding up of the Bidder or the Bank or any absorption, merger or amalgamation of the Bidder or the Bank with any other person.
7. To give full effect to this Guarantee, the Employer shall be entitled to treat the Bank as the principal debtor. The Employer shall have the fullest liberty without affecting in any way the liability of the Bank under this Guarantee from time to time to vary any of the terms and conditions contained in the said Bid Documents or to extend time for submission of the Bids or the Bid validity period or the period for conveying acceptance of Letter of Award by the Bidder or the period for fulfilment and compliance with all or any of the terms and conditions contained in the said RFP Documents by the said Bidder or to postpone for any time and from time to time any of the powers exercisable by it against the said Bidder and either to enforce or forbear from enforcing any of the terms and conditions contained in the said Bid Documents or the securities available to the Employer, and the Bank shall not be released from its liability under these presents by any exercise by the Employer of the liberty with reference to the matters aforesaid or by reason of time being given to the said Bidder or any other forbearance, act or omission on the part of the Employer or any indulgence by the Employer to the said Bidder or by any change in the constitution of the Employer or its absorption, merger or amalgamation with any other person or any other matter or thing whatsoever which under the law relating to sureties would but for this provision have the effect of releasing the Bank from its such liability.
8. Any notice by way of request, demand or otherwise hereunder shall be sufficiently given or made if addressed to the Bank and sent by courier or by registered mail to the Bank at the address set forth herein.
9. We undertake to make the payment on receipt of your notice of claim on us addressed to [name of Bank along with branch address] and delivered at our above branch which shall be deemed to have been duly authorised to receive the said notice of claim.
10. It shall not be necessary for the Employer to proceed against the said Bidder before proceeding against the Bank and the guarantee herein contained shall be enforceable against the Bank, notwithstanding any other security which the Employer may have obtained from the said Bidder or any other person and which shall, at the time when proceedings are taken against the Bank hereunder, be outstanding or unrealised.

11. We, the Bank, further undertake not to revoke this Guarantee during its currency except with the previous express consent of the Employer in writing.
12. The Bank declares that it has power to issue this Guarantee and discharge the obligations contemplate herein, the undersigned is duly authorised and has full power to execute this Guarantee for and on behalf of the Bank.
13. For the avoidance of doubt, the Bank's liability under this Guarantee shall be restricted to Rs. *** (Rupees ***** only). The Bank shall be liable to pay the said amount or any part thereof only if the Employer serves a written claim on the Bank in accordance with paragraph 9 hereof, on or before [insert date falling (equal to validity period of EMD) days after the last date for submission of Bid].

Signed and delivered by.....Bank

By the hand of Mr./Ms., its.....and authorised official.

(Signature of the Authorised Signatory) (Official Seal)

Form Tech 9: Declaration by the Tenderer for Conflict of interest
(ON BIDDER'S LETTER HEAD)

Note: Declare between SN A and B, whichever is applicable.

To,

Chief Executive Officer,
Uttarakhand Civil Aviation Development Authority,
Dehradun.

Subject: Declaration regarding Conflict of interest for participation in "Insert name of tender"

Sir/Madam,

In connection with the above-mentioned tender, I make the following declaration regarding conflicts of interest:

A. No Conflict of Interest:

I confirm that, to the best of my knowledge, neither I, nor any individual or entity involved in preparing or submitting this tender on behalf of the above organization, has any actual or potential conflict of interest in relation to the tender process or contract award.

B. If, Conflict of Interest Exists:

I declare that a potential or actual conflict of interest does exist with other bidders or any person involved in tendering process, as described below:

- **Name of Individual/Entity Involved:** [Insert Name]
- **Nature of the Relationship/Interest:** [Provide full details, e.g., employment, family ties, financial interest, etc.]
- **Description of Conflict:** [Explain how the relationship may affect the tender process]
- **Mitigation Measures**

If a conflict is declared, the following steps have been or will be taken to manage and mitigate the risk:

[Insert a detailed explanation of proposed or implemented measures, such as recusal from decision-making, independent oversight, or divestiture.]

C. Declaration and Acknowledgment

I understand that failure to declare a known or perceived conflict of interest may result in disqualification from the tender process, termination of any resulting contract, or other legal consequences.

I certify that the information provided herein is true, complete, and accurate to the best of my knowledge and belief.

Seal & Stamp of Authorised Signatory: _____

Name (Block Letters): _____

Position: _____

Date: _____

Place: _____

Form Tech 10: Notarized Affidavit

(To be executed on non-judicial stamp paper of not less than ₹100)

I/We, the duly authorized signatory(ies) of [Name of Bidder] (hereinafter referred to as "the Bidder"), having submitted a Proposal in response to tender reference No. _____ titled "insert name of tender" issued by the Uttarakhand Civil Aviation Development Authority ("UCADA"), do hereby solemnly affirm and declare as under:

1. All statements, documents, testimonials, certificates and other information furnished by the Bidder in support of its Proposal are genuine, true and correct in every respect, and no material fact has been concealed or misstated.
2. Neither the Bidder nor any of its personnel, representatives, sub-consultants, sub-service providers or their employees have, directly or indirectly, attempted to influence or interfere with the procurement process at any stage.
3. The Bidder shall indemnify and keep indemnified UCADA, its officers, employees and agents against all losses, damages, costs, expenses, penalties and liabilities incurred or suffered by UCADA on account of any lapse, omission, misrepresentation or forgery on the part of the Bidder, its personnel or its subcontractors.
4. The Bidder, M/s. _____, are not blacklisted or debarred by any Ministry, Department or Public Sector Undertaking of the Government of India, or by any State Government or Union Territory Administration in India, as on the last date of submission of Proposals.
5. This is to certify that neither our Company nor any member of its Management, including Directors or Owners, has engaged in any fraudulent practices, blacklisting of tickets, been subject to any penalty or enforcement action by the Directorate General of Civil Aviation (DGCA), nor has any case been contemplated against them in any State or Country.
6. In the event that the Bidder is found to have materially violated any of the Undertakings set forth herein, whether prior to or after the award of Contract, UCADA shall be entitled, at its sole discretion and without any liability to the Bidder, to take any one or more of the following actions:
 - a) Reject the Proposal;
 - b) Annul the Contract;
 - c) Blacklist and debar the Bidder from participating in future procurements of UCADA.

DEPONENT

Name: _____

Designation: _____

For and on behalf of: _____

Date: _____

VERIFICATION

I, the above-named Deponent, do hereby verify that the contents of this Affidavit are true and correct to the best of my knowledge and belief, and no part of it is false and nothing material has been concealed therefrom.

Verified at _____ on this _____ day of _____, 2025.

DEPONENT
(Signature & Stamp)

Form Tech 11: Financial Bid Format

[Not to be submitted with Technical Bid but to be submitted online as Financial Bid]

Tender Inviting Authority: CEO, UCADA						
Name of Work: RFP FOR INSTALLATION OF AUTOMATED WEATHER OBSERVING SYSTEMS AND CEILOMETERS ON CHAR DHAM YATRA ROUTE (INCLUDING COMPREHENSIVE MAINTENANCE FOR 03 YEARS)						
Contract No:						
Name of the Bidder/ Bidding Firm / Company:						
PRICE SCHEDULE						
(This BOQ template must not be modified/replaced by the bidder and the same should be uploaded after filling the relevant columns, else the bidder is liable to be rejected for this tender. Bidders are allowed to enter the Bidder Name and Values only)						
NUMBER #	TEXT #	NUMBER #	TEXT #	NUMBER #	NUMBER #	TEXT #
Sl. No.	Item Description	Quantity	Units	Unit Rate To be entered by the Bidder (EXCLUSIVE OF TAXES) Rs. P	TOTAL AMOUNT (EXCLUSIVE OF TAXES)	TOTAL AMOUNT In Words
1	2	4	5	13	53	55
1	Installation of AWOS system integrated with ceilometer incl. civil, electrical & mechanical work (refer Section VI & From Tech 12 of RFP)	4.000	Locations		0.00	INR Zero Only
2	Installation of ceilometer incl. civil, electrical & mechanical work. (refer Section VI & From Tech 13 of RFP)	1.000	Locations		0.00	INR Zero Only
3	CAMC for all installed AWOS systems along with manpower.	3.000	Years		0.00	INR Zero Only
4	CAMC for all installed Ceilometers along with manpower.	3.000	Years		0.00	INR Zero Only
Total in Figures					0.00	INR Zero Only
Quoted Rate in Words		INR Zero Only				
Note: - GST additional will be payable at prevailing rates. - The contract will be awarded to the bidder whose total quoted price for all items is the lowest amongst all. - The bidder shall quote per location & per year column 13 above. - Before quoting the rates the prospective bidders are advised to visit the site for better understanding of site conditions. - In case any bidder submits the financial bid in the technical cover, the bids of such bidders shall be rejected right away.						

From Tech 12: List of Deliverables with accessories (H-AWOS):

S. N.	Name of Item/Store	Make & Model	Country of origin
(1)	(2)	(3)	(4)
I			
1	Wind sensor for wind direction		
2	Wind sensor for wind speed		
3	Wind sensor installation support accessories		
4	Temperature & Humidity sensor with radiation shield and installation support accessories		
5	High precision pressure transducers		
6	System for Visibility Meteorological Optical Range (MOR), Runway Visual Range (RVR), Present Weather sensor and Background luminance sensor		
7	Ceilometer		
8	VHF Transmitter for 50Km Range		
9	Obtaining Frequency Operating License at site		
II			
1	10m frangible wind mast (tiltable)		
2	Lightning arrestor		
3	Chemical Earthing for instrument		
4	Obstruction light		
5	Weatherproof termination boxes both for power supply and signal termination		
6	Weather proof termination box with battery & battery charger of suitable capacity for supply of power to Data logger, Wind, Temperature & humidity, pressure sensors and communication Modem for 24 hrs		
7	Hybrid Solar Charger with AC power adaptor		
III			
1	DAS		
2	Battery back-up facility for DAS and all sensors (Except RVR) for 24hrs or better		
3	GPS receiver		
4	Comprehensive Surge protection Systems for protection of all H-AWOS sensors/Units/Sub units.		
IV			
1	Rack mountable dual server computer		

2	Licensed Operating system		
3	Colour display 24" Flat panel		
4	Over-voltage protection kit		
5	Mains Power distribution board		
6	Online UPS for both servers for 1 hr backup		
7	Firewall and its configuration		
V			
1	Workstations		
2	Colour display 24" LED type		
3	UPS		
VI			
1	Wireless router for 150mts with Battery backup for 30min.		
2	10.1" or better Tablet PC with 30min battery backup facility (2 per site)		
VII	Two central web server with static IP and its software for viewing & downloading heliport data (live and standby)		
VIII			
1	All licensed (system and application) software with License Nos. and CD's including web-based monitoring and remote maintenance and virus protection software		
2	Documentation (Installation, operation and maintenance manual) and softcopy for all the manuals		
IX			
1	Wireless modems (License free band) for data communication between AMI sites. to ATC and MBR		
2	Land Line Modems/Suitable Media convertor for data communication through OFC between AMI sites to ATC and MBR		
3	24 port Ethernet Switch		
4	LAN Extender		
XI			
1	Construction of RCC platform on hard soil with foundation grouting of templates for erection of Frangible and foldable 10mts Wind mast as per standards and installation of wind mast.		
2a	Installation of Comprehensive Lightning & Surge		

	Protection Systems for protection of all H-AWOS sensors/Units and Sub systems		
2b	Installations of Chemical Earthling (Signal, Power & Lightning) including all required copper cables for protection of complete field system from Lightning and Power Surges. 2 Pits for Each sites		
3	Outdoor cabling for both AMI sites. Underground Armored Twisted pair cable is to be used for Integration of RVR with DAS		
4	Indoor cabling works for the installation of communication systems. Servers, work stations, Wireless Router Etc.		

Note: As per clause 33.1 (e) MAF for all the major components of AWOS integrated with ceilometer to be submitted in the technical bid

From Tech 13: List of Deliverables with accessories (Ceilometer):

9. List of deliverables:

SN	Name of Item/Store	Make & Model	Country of origin
(1)	(2)	(3)	(4)
I			
1	Ceilometer with all accessories and software		
II			
1	Hybrid Solar Charger with and AC power adaptor		
III			
1	DAS		
2	Battery back-up facility for DAS and all sensors For 24hrs or better		
3	GPS receiver		
4	Filed enclosure box for DAS and Power supply with surge protection devises, Mounting poles		
5	Weather proof termination boxes both for power supply and signal termination		
	Comprehensive Surge protection Systems for Protection		
IV			
1	Rack mountable dual computer		
2	Licensed Operating system		
3	Over-voltage protection kit		
4	Mains Power distribution board		
5	Online UPS for the computer for 1 hr backup		
6	Computer i7 or equivalent		
7	Colour display 24" LED type		
VI			
1	Wireless router for 150mts with Battery backup for		

SN	Name of Item/Store	Make & Model	Country of origin
(1)	(2)	(3)	(4)
	30min.		
VII			
1	All licensed (system and application) software with License Nos. and CD's including web-based monitoring and maintenance remote and protection software Virus		
2	Documentation (Installation, operation and maintenance manual) and softcopy for all the manuals		
VII			
1	Wireless modems (License free band) for data communication between AMI sites to ATC		
2	Land Line Modems/Suitable Media convertor for data communication through OFC between AMI sites to ATC and MBR		
3	24 port Ethernet Switch		
4	LAN Extender		
XI			
1	Indoor cabling works for the installation of communication systems, Servers, work stations, Wireless Router Etc.		

Note: As per clause 33.1 (e) MAF for all the major components of ceilometer to be submitted in the technical bid

Form Tech 14: Checklist of Documents to be submitted in the technical bid

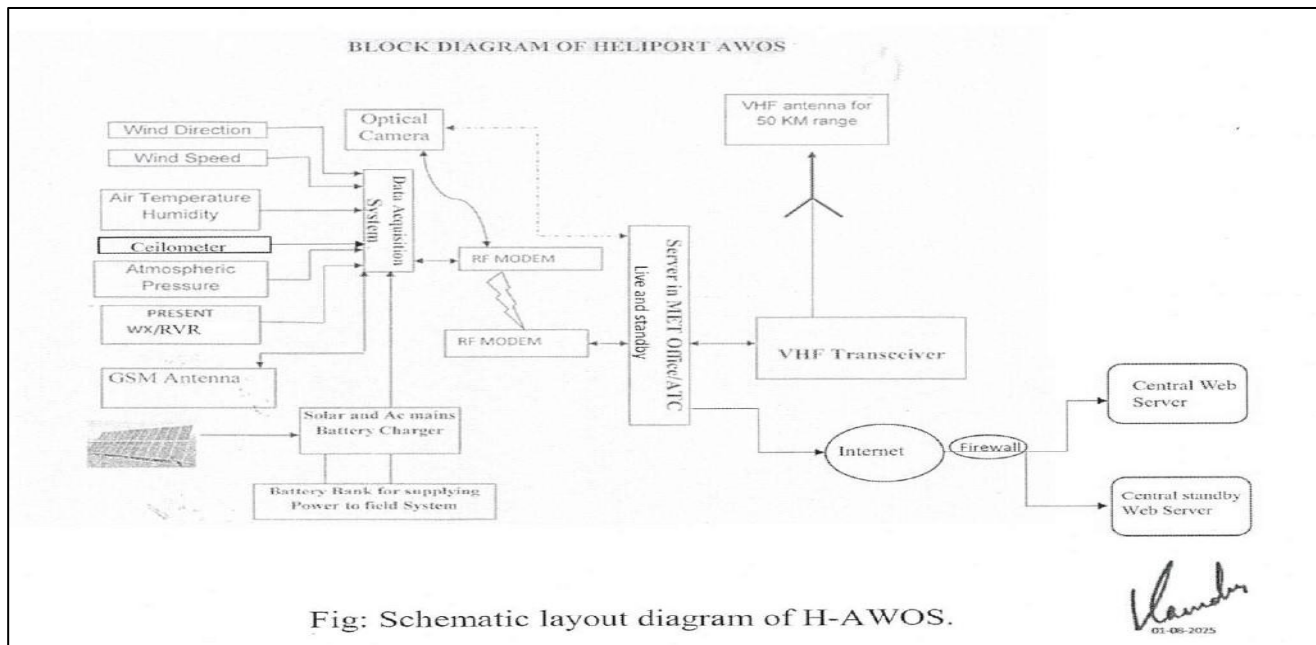
SN	Criteria	Bid Page No.
1.	Tender Fee Note: Submit the same as original in the office of the bid inviting officer.	
2.	Earnest Money Deposit- Form Tech 8 Note: Submit the same as original in the office of the bid inviting officer.	
3.	Form Tech1: Letter of Bid	
4.	Form Tech2: Details of Bidder	
5.	Form Tech3: Annual Financial Turnover	
6.	Form Tech4- Profit in last 05 Years	
7.	Form Tech5: Satisfactory completion of similar contracts	
8.	Form Tech6: Format for Evidence of Access to or Availability of Credit Facilities	
9.	Form Tech7: Power of Attorney for Signing of Bid	
10.	Form Tech9: Declaration by the Tenderer for Conflict of interest	
11.	Form Tech10: Notarized Affidavit	
12.	Audited Copy of balance sheets (FY2020-21, 2021-22, 2022-23, 2023-24 & 2024-25)	
13.	Audited Copy of Profit loss statements (FY2020-21, 2021-22, 2022-23, 2023-24 & 2024-25)	
14.	Copy of Income Tax returns (FY2020-21, 2021-22, 2022-23, 2023-24 & 2024-25)	
15.	Copy of PAN registration	
16.	Copy of GST registration	
17.	Copy of EPF & ESIC registration	
18.	Experience certificate for completion of similar works	
19.	Tech form12: List of Deliverable with accessories (H-AWOS)	
20.	Tech form14: List of Deliverable with accessories (Ceilometer)	
21.	MAF for major components for HAWOS and ceilometer	

SECTION VI: MINIMUM TECHNICAL SPECIFICATIONS & LOCATIONS

1. Minimum Technical Specification for Heliport-Automated Weather Observation System (H-AWOS)

1.General description of HAWOS:

- 1.1. Heliport-Automated Weather Observation System (H-AWOS) is an aeronautical support facility comprising of a suit of meteorological sensors, camera, data acquisition system, communication module and Computer with appropriate software for data processing, storage and visualization. The H- AWOS performs the measurement or assessment of meteorological parameters, data processing including quality and consistency, auto generation of Local, (MET REPORT and its dissemination through suitable communication means including broadcast over assigned VHF frequency on request and reply basis. The sensor suit shall consist of following sensors / systems:
 - i. Wind (Speed & Direction) sensor for measurement and reporting of surface wind (speed & direction), gusts, and variable wind.
 - ii. Pressure sensor for measurement and reporting of surface pressure, altimeter setting and density altitude.
 - iii. Temperature and Humidity sensor for measurement and reporting of air temperature, dew point temperature / relative humidity.
 - iv. System for Visibility / Meteorological Optical Range (MOR), Runway Visual Range (RVR), Present Weather sensor and Background luminance sensor.
 - v. High resolution Camera
 - vi. Ceilometer
 - vii. These sensors are installed on 10m frangible lattice mast at location with suitable exposure conditions.
- 1.2. The block diagram illustrates the Heliport Automated Weather Observation System (H-AWOS), which gathers and transmits real-time weather data to support helicopter operations. It begins with a set of meteorological sensors measuring wind direction, wind speed, air temperature, humidity, atmospheric pressure, and present weather/visibility, RVR. These parameters are fed into a central Data Acquisition System, which also receives inputs from an optical camera for visual monitoring.
- 1.3. "The collected data is transmitted via RF modems to a server located in the MET Office or Air Traffic Control (ATC). This server acts as the main processing hub. One standby server is will also be installed to act as standby main processing hub. For broader data transmission, the server is connected to a VHF transceiver and antenna with a 50 km range, allowing voice or data communication with nearby aircraft/helicopter or stations.



- 1.4. The internet connection allows the weather data to be forwarded from server located at ATC to Central Web Server through firewall. One Central Standby Web Server will also be installed to ensure system redundancy.
- 1.5. Power to the field system is maintained through a battery bank, which is charged using a combination of solar panels and AC mains. Solar Charger and AC Adapter shall be capable of providing power backup for 20 cloudy days. This ensures uninterrupted operation even in remote locations. The entire setup is designed to function autonomously and continuously, enhancing flight safety and operational efficiency at heliports.

2. System Technical Specifications

H-AWOS shall continuously provide real-time weather data from various meteorological sensors for support of helicopter operations.

H-AWOS architecture shall be modular so as to provide the ability to isolate any sub-unit, including data processing units, for service without affecting overall system performance.

Data Acquisition systems (DAS) shall be installed at each H-AWOS site of heliports for the collection of the raw data from the sensor and for communication of data to CDPL.

1.6. Field Units

2.1.1. Sensors

All the sensors should be traceable to US National Institute of Standards and Technology (NIST)/WMO specifications or certified by equivalent National agency of OEM's country. The following specifications of sensors mentioned below shall be in accordance with latest guidelines by ICAO.

2.1.1.1. Wind Sensor

1. Wind Direction

Type of sensor	Vane/Ultrasonic
Range	0 Degree to 360 Degree
Accuracy	5 Degree or better
Resolution	1 Degree or better
Threshold	Less than 1 kt.
Operating Temperature	-20 to +55°C

II. Wind Speed

Type of sensor	Cup anemometer/ Ultrasonic
Range	0 to 75m/s (0 to 145Knots)
Accuracy	0.5ms - 1 for $\leq 5 \text{ ms}^{-1}$ 10% for 5 m s^{-1}
Resolution	0.05 m/s (0.1 Knot).
Threshold	Less than 1 knot.
Operating Temperature	- 20 to + 55 * C

2.1.1.2. Temperature Sensor

Type of sensor	Pt.100
Range	- 40 deg * C to 60 deg * C
Accuracy	0.2 deg * C or better over the operating temperature range (with Radiation Shield)
Resolution	0.1 deg * C

2.1.1.3. Relative Humidity Sensor

Type of sensor	Solid state Capacitive / Thin paper capacitive type or better
Range	0% to 100%
Accuracy	3% RH or better
Resolution	1%

2.1.1.4. Atmospheric Pressure Sensor

Type of sensor PO	Multiple transducer type pressure sensor
Range	500 hPa to 1100 hPa
Accuracy	0.2hPa or better for entire range
Resolution	0.1hPa

2.1.1.5. Present Weather/Meteorological Optical Range (MOR) / Runway Visual Range (RVR) Sensor/Back ground luminance

Measurement	Visibility Meteorological Optical Range (MOR), Runway Visual Range (RVR)(computed), Back ground luminance and Present Weather
Present Weather	Identification of Mist, Fog, Drizzle, Drizzle & snow, Rain, freezing rain, rain and drizzle,

	rain and snow and snow.
Precipitation Intensity	0 to 90 mm per hour
Precipitation measurement amount	0 to 90 mm
Snow measurement	0 to 900 mm
Precipitation detection sensitivity	0.05 mm per hour or better.
Weather Code reporting	Weather as per WMO 4680 (SYNOP) and 4678 (METAR) codes
Visibility/ MOR Range	10 meter to 10000 meter or better
Visibility Accuracy	+10% of the Visibility/ MOR reported or better
Visibility Resolution	1 meter or better
Contamination check	Shall have facility for measuring window contamination and its correction
Background Luminance Monitor (BLM)	For RVR calculation as per ICAO
Frangibility	Shall be frangible as per ICAO requirements.
Enclosures	Shall conform to IP66 standards
Operating Temperature	-20°C to 60°C
Wind Speed survival	60 m/s

2.1.1.6. Camera:

The camera is intended to be used for visual appreciation of overall meteorological condition besides the detection of non-uniform fog patches. The image in compressed from the camera shall be sent continuously to a separate folder in the server.

Field of View (FOV): 360 Degree

Type: IP based, 15 Mega Pixel or better

Image compression feature: Yes

2.1.1.7. Ceilometer

Type of sensor	Laser
Range	10 m to 7600 m (25000ft) or better with at least 3-layer detection facility

Accuracy	10m (33 ft) or 2% of target distance whichever is greater
Resolution	Resolution step should not be greater than 10m (33ft) below the altitude 1500m (500ft), 30m (100ft) above 1500m

2.1.1.8. Specifications for sampling, averaging, and message generation:

Wind: The wind speed shall be reported in Knots, KMPH, MPS (Users selectable). Mean wind speed and direction, significant variation, gust, variable wind, maximum wind, minimum wind, shall be reported. The averaging period shall be two minutes and 10 minutes. The averaging period for measuring variations from the mean wind speed (gusts) shall be 3 seconds.

Temperature: The unit for reporting shall be degree Celsius. Temperature and Dew point shall be reported in whole degree. Observed value not fitting the reporting scale in use shall be rounded to the nearest whole degree Celsius, 0.2°C (or better) and shall be rounded up to the next higher whole degree Celsius. The temperature below 0°C shall be identified with M. The averaging period shall be one minute.

Pressure: The unit for reporting Pressure shall be hector pascals (hPa). The QNH, QFE shall be reported in whole hPa in four digits. Fraction shall be rounded down to nearest lower whole hectopascals. The averaging period shall be one minute.

Ceilometer: Data sampling of 30 seconds

Visibility / Meteorological Optical Range (MOR), Runway Visual Range (RVR), Present Weather sensor and Background luminance sensor: Data sampling of 15 seconds

2.1.1.9. Data Acquisition System (DAS)

Data Acquisition system (DAS) shall accept output from above sensors and GPS signal for time synchronization. Battery backup support for all field sensors, including communication equipment and DAS itself is required for minimum 24-hour duration. Alarm on low battery status shall be communicated to the Central Data Processing & Integrating Server. In addition, it must transmit alarms on AC power failures.

DAS shall be user configurable to accept data from third party sensors (either analog or digital O/P) of any make & model other than those being offered.

DAS should perform Range & temporal checks of data coming from sensors before processing and transmitting to main Central data processing server in accordance to Guide to Meteorological Instruments and Methods of Observation (CIMO) - WMO No. 8 (2014 Edition updated in 2017).

The Data Acquisition System shall have facility to sample the output of the attached sensors with user selected sampling frequency and sampling time, process the samples so collected to obtain instantaneous, average (including vector average for wind) values of the given parameter.

The Data Acquisition System should have a facility to apply Quality Control procedures such as gross error check and time consistency check for sensors interfaced. Detailed QC procedures and algorithms proposed to be implemented at field sites shall be in accordance with WMO No.8

"Guide to Meteorological Instruments and Methods of Observation" Part-III Chapter 1 and Part-II Chapter 1, 2014 Edition.

The stored data shall be retrievable via serial port/USB port to a PC/laptop and a pen drive or any other compact and commercially available solid state memory device in standard text file format without requirement of specific software to retrieve the data.

The Data Acquisition System shall have facility to store measurement of parameters along with time in internal RAM which shall be sufficient to store the data of about 12 parameters for at least One year with measurement interval of 1 min. Data shall be available even if the power supply to the system has failed. RAM Backup battery shall be provided. It should be possible to upgrade the memory size at a later date without any hardware replacements.

Plausible value check (The gross error check on measured value): Each sample should be examined to check if its value lies within the measurement range of a particular station. If the value fails, the check it is rejected and not used in the further computation of the relevant parameter.

Check on Plausible rate of change (The time consistency check on measured values): This check is to verify the rate of change (unrealistic jumps in the values). After each signal measurement, the current sample shall be compared to the proceeding one. If the difference of these two samples is more than specified limit then the current sample is identified as suspect and not used for the computation of average. However, it is still used for checking temporal consistency of sample.

Specification for DAS

Description	Specification
Reference	Standard DAS with data communication facilities.
Memory	At least 32MB flash memory expandable or suitable media via SD card
Internal Battery	Li-ion or suitable battery
Serial ports	DAS should have sufficient suitable ports to acquire the data from all sensors.
Ethernet ports	1 or more ports
USB port or suitable facility	1 No. or more
Configuration port	1 No.
Removable media	SD card & USB thumb drive sufficient to store data of at least 3 months.
A/D convertor	16 Bit A/D convertor or better
Keyboard & Display	Keyboard and Built in display desirable with readability
Communication	Through R. F Modem

DAS software	Configuration software shall support command line interface using hyper terminal or GUL.
Input protection	Surge protection of IEC 61000-4-5 standard or better
Logging Mode	User selectable
Averaging & integration period	User selectable
Time synchronization	DAS and server to be synchronized with GPS time.
RTC	Inbuilt RTC synchronized with GPS receiver and Li-ion battery or suitable battery.
Operating Temperature	-20°C to +60°C
Protection class	IP-66 or better

2.1.1.10. RF Modem:

The Radio Frequency Modem should communicate the data from all sensors and imagery data (Camera) from field site to the computer installed at MET Office / Air Traffic control through wireless license free band.

Operating band: 2.4 GHZ

Ports: Built in Configurable ports for communicating both Sensor & Imagery data.

LED indicators: Power, LAN, WLAN

Range: 5KM or better.

Power: 27dBm or better.

2.1.1.10. Frangible mast:

All sensors for Wind Speed, Direction and Temperature & Humidity shall be installed on a 10 meters Tilttable frangible wind mast. The mast shall comply with ICAO Aerodrome Design Manual-Part 6 Frangibility (Doc 9157 Part 6). Firm shall give the copy of Frangibility certificate along with technical bid

2.2. Indoor Equipment

General Requirements

- i. Indoor units consist of Dual Hot redundant CDPI (2 servers in hot redundant mode)
- ii. Instrument cabinet/racks containing the CDPI, modems and other communication equipment.
- iii. Online sinewave UPS for half-an hour backup with SMF battery to cater to the requirement of all indoor equipment.
- iv. Display system consisting of Wireless routers, 10.1-inch, 42-inch LED display for display of runway parameters as per user selection.

2.2.1 Central Data Processing and Integrator (CDPI)

Detailed specifications of CDPI are given below:

Specifications of CDPI Server (2, with standby server)

Form factor	1 U rack
Processor type	Intel
Processor family	Intel® Xeon® Scalable 8100/8200 series Intel® Xeon Scalable 3100/3200 series or better
Processor core	9 or more
Processor Cache	8 MB per core or better
Memory	Upto 192 GB (6DIMM slots):32 GB or better
I/O slots	2 PCIe slots: <ul style="list-style-type: none"> • One x8PCIe slot with x4 bandwidth.2.0, half-length, half-height • Onex 16PCIe slot with x16 bandwidth,3.0, half-length, full-height
RAID controller	Internal controllers: PERC \$110 (SW RAID) PERCH310 PER CH 710 External HBAs (RAID): PERCH810 External HBAs (non-RAID): 6 Gbps SASHBA
Drive bays	Up to eight 2.5" hot-plug SAS, SATA or SSD or four 3.5" SAS, SATA
Minimum internal storage	16 TB or more
Hard drives	SATAI TB or better
Embedded NIC	Broadcom 5720 Dual Port1Gb LOM
I/O adapter options	i. 10GB Ethernet: ii. Intel X520 Dual Port 10Gb DA/SFP+ server adapter Intel X540 Dual Port 10Gb Base-T adapter FC8/FC4 HBA: iii. QLogic QLE2460 4Gb Single Port FC HBA QLogic QLE2462 4Gb Dual Port FC HBA QLogic QLE2560 8Gb Single Port FC HBA QLogic QLE2562 8Gb Dual I Port FC HBA Emulex® LPe-12000- E 8Gb Single Port

	FC HBA Emulex LPe-12002-E 8Gb Dual Port FC HBA Brocade 815 8Gb Single Port FC HBA iv. Brocade 825 8Gb Dual Port FC HBA
Power	Platinum efficiency, hot-plug, redundant 350W and 550 W power supplies: Bronze efficiency, cabled 350 W power supply Auto-ranging power supplies
Availability	High-efficiency, hot-plug, redundant power supplies; hot-plug hard drives; TPM; dual internal SD support; fan fault tolerance; optional bezel; information tag; ECC memory, interactive LCD screen; ENERGYSTAR compliant
Remote management	Basic management (default), iDRAC7with Life cycle Controller, iDRAC7 Express (upgrade option), iDRAC7 Enterprise (upgrade option), 8GBor16GBV-flash media (upgrade options)

- 2.2.1.1** CDPI shall obtain sensor data from RF Modem. Processing software shall be capable of processing all data received from sensors. CDPI shall be hot redundant; i.e. when primary server becomes defective, secondary server automatically takes over and does all functions of primary. While it takes over to secondary server, data shall not be missed. CDPI shall get continuous power from on-line UPS with battery back-up of minimum 1 hr on full load. CDPI shall broadly perform the following functions/tasks.
- 2.2.1.2** Data quality checks from all Runway sites (Range, Temporal and Spatial as per Guide to Meteorological Instruments and Methods of Observation (CIMO)-WMO No. 8 (2014 Edition updated in 2017).
- 2.2.1.3** 1-minute and 10-minute running average of RVR shall be computed using Background Luminance value obtained from field DAS. CDPI shall obtain Runway Light Intensity Information either on any suitable port.
- 2.2.1.4** 2-minute and 10-minute running average of wind Gust/Squall information.
- 2.2.1.5** 1-minute running average of Temperature and Dew Point temperature.
- 2.2.1.6** 1-minute running average of Pressure, QFE and QNH.
- 2.2.1.7** Generates METAR, Met Report and AFTN output for further dissemination of Data to various user agencies.
- 2.2.1.8** CDPI shall generate ATIS information as per standard ICAO format and will be available on the CDPI server port.
- 2.2.1.9** CDPI shall take data from Observer work station for which sensors are not available or faulty. It shall also obtain manual data such as cloud information, TREND, REMARKS, etc. and any other met parameters as and when required to be entered manually.
- 2.2.1.10** All technical parameters of the systems and status of field systems shall be sent to maintenance workstation.
- 2.2.1.11** CDPI shall have facility to upload data and health parameters of field equipment into the web server at user defined intervals using FTP or http protocol.

2.2.1.12 The Software Support platforms for operating system shall be latest Microsoft window server operating systems or Linux ensuring upgrades during Warranty and Comprehensive Annual Maintenance Contract.

2.2.1.13 Following Parameters are to be displayed as per user selection, i.e. user shall have pre-configured the display structure, Runway Number

- a) Time (UTC)
- b) Wind Direction & Speed (2-minute average)
- c) Squall and Gusty wind warning
- d) 1-minute running average of MOR & RVR and Trend
- e) QFE & QNH
- f) 1-minute running average of Temperature & Dew Point
- g) Height of Base of Low Cloud
- h) Present Weather.
- i) Current METAR/SPECI as & when available from CDPI
- j) Current MET Report and Special report as & when available from CDPI
- k) Graphical display of time profile of wind, wind rose for runway

Selected for past 1 hour to 24 hours as per user selection as & when available from CDPI.

2.2.1.15 Web Based Remote Monitoring System

Firm shall supply one Web Server with one standby for H-AWOS online monitoring (web based) software. Specifications of web server are provided below

SN	Specification	Requirement
1.	Processor	Intel Core i-9 or better
Configuration		
2.	Chipset & Motherboard	Intel 9 series or higher chipset.
3.	Memory	32 GB or better
4.	HDD:	SATA, 1 TB or better
6.	Video controller	Dedicated Video Memory 512MB/ Integrated Intel HD Graphics
7.	Wireless Connectivity	Integrated wireless b/g/n
8.	DVD Writer	Integrated 8X DVD Writer or higher
9.	Expansion Port 3	3 USB, 10/100/1000 Gigabit Ethernet card, VGA/HDMI/Microphone, stereo head phone and other standard Features.

Internet will be provided at heliport. Firm shall program the CDPI server for auto uploading of H-AWOS data and its health parameters into the web server through FTP/HTTP/TCP (or any standard available protocol).

2.3. Software Requirements

2.3.1 General features of software

- a) All software shall be with enterprise license, media, documentation and warranty. It shall work on popular operating system that provides flexibility for multi-tasking,

graphical interfaces for data visualization, and display of data as per user requirement to meet all operational requirements at the heliport.

- b) It shall have necessary security features easily configurable and up-gradable confirming to the software requirements of ICAO and WMO.
- c) The software shall run on any workstation and shall allow user Login for configuring the type of workstation and allow processing of data.
- d) Software shall have the provision for validation of data and report correctness based on the data quality checks as referred in WMO. The quality checks software includes climatological checks, temporal checks and internal consistency checks.

2.3.2. Data Presentation

- a) It shall provide capabilities for background processes, which starts automatically when operating system is started.
- b) The machine shall set to log on with a default configurable role suitable for that specific console.
- c) The access to the system shall be controlled through security prompt & password.
- d) Event monitor application shall be able to view the events generated by the processing unit and to acknowledge the alarm conditions. Data faults shall include:
 - i. Communication faults
 - ii. Sensor faults
 - iii. Missing data
 - iv. Value too high or too low
 - v. Value higher or lower than heliport operating maxima
 - vi. Value jumping too rapidly
 - vii. Value "frozen" within a small range of value
- e) The system shall monitor the current weather all the time and prompt all operators (audio/visual prompt) to generate message as per standard ICAO/WMO format.
- f) All the computer time shall be synchronized with GPS.
- g) The system shall not transmit invalid data.
- h) The message transmission scheduling shall be configurable.
- i) The templates for manually generating following reports shall be available which shall be activated on need basis.
 - METAR/SPECI
 - Warning
- j) The tenderer shall give an undertaking that changes suggested by ICAO/WMO in method of reporting or format during the warranty or CAMC period will be incorporated without any extra cost.

2.4 Data Computation and Storage

2.4.1 The provision for performing number of statistical, arithmetic and logical calculation for the stored data shall be available such as:

- a) Min/Max calculations
- b) Averaging
- c) Unit conversion
- d) Scaling and offset

- e) Precision pressure elevation
- f) Squall and gusty wind, cross wind/Track wind and wind rose.
- g) Marked discontinuity
- h) Background luminance value for RVR
- i) QFE to QNH
- j) Daily extreme values

2.4.2 The values shall be derived from raw data used for message generation & display purpose. Measured and calculated data as well as transmitted reports are required to be archived for a period of one year in the hard disk.

2.4.3 There shall be web-based data retrieval facility.

2.4.4 A data back-up facility also shall be the part of the CDPI system.

2.4.5 The archive and backup facility for the data transfer from the database on to the external removable medium shall be provided for following setup.

- a) One year for all the parameters.
- b) Resolution: One minute, configurable.
- c) Stored parameters: All relevant measured and calculated variables, transmitted reports and system alarms.

2.4.6 Latest sensor data, latest calculated running averages and system health data shall be stored in text file.

2.5. Application software: Software which the Firm may feel necessary to meet the requirement shall be included in the offer and shall be supported during warranty and CAMC.

2.6 Backup and Restoration

The Firm shall demonstrate step by step Back-up and restoration of full system during the Site Acceptance Test (SAT). The firm shall make provision to take backup of the entire server in a bootable pen drive/ USB external hard disk or any other suitable media. In case of crash of the server, there may be system to restore the entire system by just booting the server from that media. There may be arrangement to empty the database table data to reduce the size (data) of the system before taking the backup in Pen drive/ USB external hard disk or any suitable media depending on the size (data) of the server, backup may be taken in suitable media.

2.7. Audio Broadcast to Aircraft/Helicopter:

A suitable module either software or hardware should perform the following functions

- i. It identifies the authorized user for data broadcasting.
- ii. The request will be command input from VHF Transceiver unit on-board of helicopter/aircraft.
- iii. The module should then generate the standard voice meteorological reports as per the ICAO phraseology and vocabulary for subsequent broadcast over VHF radio communication.

2.8.VHF Transceiver

VHF transceiver should be capable of handling following functions:

- i. Receive the request command, for the data, from the pilot on-board, in aviation band (in the frequency range of 118 to 135 MHz) through PTT function.

- ii. Request is then demodulated in 2/3 Pulse form and sends to Audio Broadcast module.
- iii. Receives voice ATIS from audio broadcast Module and transmit the same in aviation band to broadcast on board up to a range of 50KM.
- iv. The module will remain in sleep mode until the next request is received
- v. Vendor has to get WPC license.

3. Deployment of Skilled Manpower

The vendor shall ensure the deployment of one skilled and trained technical personnel at the designated site during operational hours throughout the warranty and CAMC period.

The deployed personnel shall be responsible for:

- i. Monitoring the H-AWOS system status and submission of serviceability status report every fortnight.
- ii. Attending to any unserviceability or malfunction.
- iii. Coordinating with the vendor's backend support team for timely rectification.
- iv. Maintaining a log of system performance and downtime.
- v. The personnel shall possess adequate technical qualifications and experience in handling similar automated weather systems and shall remain available on-site during heliport operational hours, including weekends and holidays if operations are scheduled.

4. Comprehensive Maintenance

- i. The vendor shall provide a comprehensive on-site warranty for a period of three (3) years from the date of successful commissioning of H-AWOS. During this period, all repairs, replacements, software updates, calibration, and preventive maintenance shall be provided at no additional cost.
- ii. The vendor shall provide a Comprehensive Annual Maintenance Contract (CAMC) for a further period of three (3) years. The CAMC shall include preventive and corrective maintenance, supply and replacement of defective parts, annual calibration of sensors, software updates, and system health monitoring.
- iii. The vendor shall ensure availability of spare parts and technical support throughout the CAMC period. A detailed scope of services, schedule of visits, and response time commitments shall be clearly defined in the CAMC agreement.

5. Calibration and Preventive Maintenance

- i. The vendor shall be responsible to provide calibration certificate with clear indication of traceability to national/international standards of the complete H-AWOS including all associated sensors and subsystems every 6 months, to ensure continued accuracy and compliance with ICAO and WMO standards.
- ii. The vendor shall also undertake preventive maintenance during the calibration visit, verify system performance, and update firmware/software if necessary.
- iii. The cost of annual calibration and associated services shall be included in the Annual Maintenance Contract (AMC).

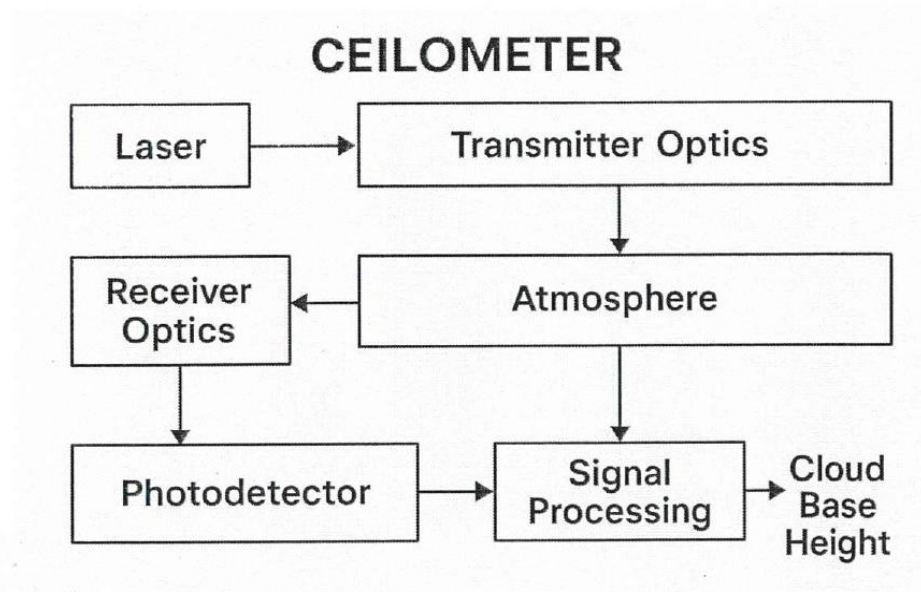
2. Minimum Technical Specification for Ceilometer

1. General description of Ceilometer:

A ceilometer is a laser-based remote sensing instrument used for the measurement and reporting of cloud base height and vertical visibility. It is an essential component of automated meteorological observation systems at airports and heliports, supporting aviation safety and operational efficiency. The ceilometer operates by emitting short pulses of laser light vertically into the atmosphere. When these pulses encounter cloud particles or aerosols, the light is scattered back to the instrument, and the time delay between emission and reception is used to calculate the distance to the cloud base.

The ceilometer system includes an optical transmitter, a receiver with photo detector, internal data processing unit, and communication interface. It is capable of detecting one or more cloud layers and provides continuous vertical profiles of the atmosphere.

Block diagram is illustrated in following figure:



A laser emits a short pulse of light which is directed upward by the transmitter optics into the atmosphere. As the light travels upward, it interacts with cloud particles, and a portion of the light is scattered back toward the ground. This backscattered light is collected by the receiver optics and focused onto a photo detector. The photo detector converts the light signal into an electrical signal, which is then sent to the signal processing unit. The signal processing calculates the time it took for the light to return, which is used to determine the cloud base height.

2. Technical Specification of Ceilometer

Type of sensor	Laser
Range	10 m to 7600 m (25000ft) or better with at least 3-layer detection facility
Accuracy	±10m (33 ft) or 2% of target distance whichever is greater

Resolution	Resolution step should not be greater than 10m (33ft) below the altitude 1500m (500ft), 30m (100ft) above 1500m
Data Sampling	30 seconds

3. Software Requirements

General features of software

- i. All software shall be with enterprise license, media, documentation and warranty. It shall work on popular operating system that provides flexibility for multi-tasking, graphical interfaces for data visualization, and display of data as per user requirement to meet all operational requirements at the heliport.
- ii. It shall have necessary security features easily configurable and up-gradable confirming to the software requirements of ICAO and WMO.
- iii. The software shall run on any workstation and shall allow user Login for configuring the type of workstation and allow processing of data.
- iv. Software shall have the provision for validation of data and report correctness based on the data quality checks as referred in WMO. The quality checks software includes climatological checks, temporal checks and internal consistency checks.

4. Data Acquisition System (DAS)

Data Acquisition system (DAS) shall accept output from above sensors and GPS signal for time synchronization. Battery backup support for all field sensors, including communication equipment and DAS itself is required for minimum 24-hour duration. Alarm on low battery status shall be communicated to the Central Data Processing & Integrating Server. In addition, it must transmit alarms on AC power failures.

DAS shall be user configurable to accept data from third party sensors (either analog or digital O/P) of any make & model other than those being offered.

DAS should perform Range & temporal checks of data coming from sensors before processing and transmitting to main Central data processing sever in accordance to Guide to Meteorological Instruments and Methods of Observation (CIMO) WMO No. 8 (2014 Edition. updated in 2017).

The Data Acquisition System shall have facility to sample the output of the attached sensors with user selected sampling frequency and sampling time, process the samples so collected to obtain instantaneous, average (including vector average for wind) values of the given parameter.

The Data Acquisition System should have a facility to apply Quality Control procedures such as gross error check and time consistency check for sensors interfaced. Detailed QC procedures and algorithms proposed to be implemented at field sites shall be in accordance with WMO No.8 "Guide to Meteorological Instruments and Methods of Observation" Part-III Chapter 1 and Part-11 Chapter 1, 2014 Edition.

The stored data shall be retrievable via serial port/USB port to a PC/laptop and a pen drive or any other compact and commercially available solid state memory device in standard text file format without requirement of specific software to retrieve the data.

The Data Acquisition System shall have facility to store measurement of parameters along with time in internal RAM which shall be sufficient to store the data of about 12 parameters for at least One year with measurement interval of 1 min. Data shall be available even if the power

supply to the system has failed. RAM Backup battery shall be provided. It should be possible to upgrade the memory size at a later date without any hardware replacements.

Plausible value check (The gross error check on measured value): Each sample should be examined to check if its value lies within the measurement range of a particular station. If the value fails, the check it is rejected and not used in the further computation of the relevant parameter.

Check on Plausible rate of change (The time consistency check on measured values): This check is to verify the rate of change (unrealistic jumps in the values). After each signal measurement, the current sample shall be compared to the proceeding one. If the difference of these two samples is more than specified limit then the current sample is identified as suspect and not used for the computation of average. However, it is still used for checking temporal consistency of sample.

Specification for DAS

Description	Specification
Reference	Standard DAS with data communication facilities.
Memory	At least 32MB flash memory expandable or suitable media via SD card
Internal Battery	Li-ion or suitable battery
Serial ports	DAS should have sufficient suitable ports to acquire the data from all sensors.
Ethernet ports	1 or more ports
USB port or suitable facility	1 No. or more
Configuration port	1 No.
Removable media	SD card & USB thumb drive sufficient to store data of at least 3 months.
A/D convertor	16 Bit A/D convertor or better
Keyboard & Display	Keyboard and Built in display desirable with readability
Communication	Through R. F Modem
DAS software	Configuration software shall support command line interface using hyper terminal or GUI.
Input protection	Surge protection of IEC 61000-4-5 standard or better
Logging Mode	User selectable
Averaging & integration period	User selectable
Time synchronization	DAS and server to be synchronized with GPS time.
RTC	Inbuilt RTC synchronized with GPS receiver and Li-ion battery or suitable battery.
Operating Temperature	-20°C to +60°C
Protection class	IP-66 or better

5. RF Modem:

The Radio Frequency Modem should communicate the data from all sensors from field site to the computer installed at MET Office / Air Traffic control through wireless license free band.

Operating band: 2.4 GHZ

Ports Built in Configurable ports for communicating both Sensor & Imagery data.

LED indicators : Power, LAN, WLAN

Range : 5KM or better.

Power : 27dBm or better.

6. i7 or equivalent Computer with necessary software for ceilometer

The software should receive ceilometer data automatically. Processing software shall be capable of processing and display all data received. The software on the computer shall automatically display height of Base of Low Cloud. The computer should transmit data to a centralized server through Internet. Internet will be provided at heliport.

The i7 computer shall FTP every 15min the Cloud information and additional Sensor parameters (if any) to the Central server in a desired format, the credentials of the server will be shared with the LI bidder.

7. Comprehensive Maintenance

- i. The vendor shall provide a comprehensive on-site warranty for a period of three (3) years from the date of successful commissioning of Ceilometer. During this period, all repairs, replacements, software updates, calibration, and preventive maintenance shall be provided at no additional cost.
- ii. The vendor shall provide a Comprehensive Annual Maintenance Contract (CAMC) for a further period of three (03) years. The CAMC shall include preventive and corrective maintenance, supply and replacement of defective parts, annual calibration of sensors, software updates, and system health monitoring.
- iii. The vendor shall ensure availability of spare parts and technical support throughout the CAMC period. A detailed scope of services, schedule of visits, and response time commitments shall be clearly defined in the CAMC agreement.

8. Calibration and Preventive Maintenance

- i. The vendor shall be responsible to provide calibration certificate with clear indication of traceability to national/international standards including all associated sensors and subsystems every 6 months, to ensure continued accuracy and compliance with ICAO and WMO standards.
- ii. The vendor shall also undertake preventive maintenance during the calibration visit, verify system performance, and update firmware/software if necessary.
- iii. The cost of annual calibration and associated services shall be included in the Annual Maintenance Contract (AMC).

Locations for installation & commissioning:

A. AWOS integrated with ceilometer

1. Shri Badri Nath Ji
2. Harsil/ Jhala
3. Kharsali
4. Guptkashi

B. Ceilometer

1. Lincholi

SECTION VII: GENERAL CONDITIONS OF CONTRACT (GCC)

A. General

1. Definitions

- 1.1. **Additional performance Security** is an additional monetary guarantee apart from performance guarantee to be furnished by the successful Bidder in case of abnormally low bid or unbalanced bid.
- 1.2. **Adjudicator** is the person appointed jointly by the Employer and the Contractor to resolve disputes in the first instance, as provided for in GCC 29 hereunder.
- 1.3. **Bill of Quantities** means the priced and completed Bill of Quantities forming part of the Bid.
- 1.4. **Certificate of Completion** or Completion Certificate means the certificate issued under GCC Clause 62.1.
- 1.5. **Compensation events** are those defined in Clause 51 hereunder.
- 1.6. **Completion** means that the Works (or, where the context so requires, a specific Section thereof, if any, specified in the Contract), have been completed in all respects as per Contract operationally and structurally and put in a tight and clean condition, that all Test for Completion of the Works (or such specific Section thereof) has been completed.
- 1.7. **The Completion Date** is the date of completion of the Works as certified by the Employer in accordance with Sub Clause 62.1.
- 1.8. The Contract is the contract between the Employer and the Contractor to execute, complete and maintain the Works. It consists of the documents listed in Clause 2.5 below which are collectively referred to as the Contract Documents.
- 1.9. **The Contract price** is the price stated in the Letter of Acceptance and thereafter as adjusted in accordance with the provisions of the Contract.
- 1.10. **The Contractor** is a person or corporate body whose Bid to carry out the Works has been accepted by the Employer.
- 1.11. **The Contractor's Bid** is the completed Bid document submitted by the Contractor to the Employer.
- 1.12. **Contractor's Equipment** or Construction Equipment means all apparatus, equipment, machinery, construction plant, vehicles and other items required by the Contractor for the execution of the Works. Contractor's Equipment excludes Temporary Works, Plant, Materials, and any other things intended to form or forming part of the Permanent Works.
- 1.13. **Contractor's Representative** means the person named as such in the Contract for and on behalf of the Contractor and appointed from time to time by the Contractor, with the approval of the Employer, to perform the duties under the Contract.

- 1.14. **The Defects Liability Certificate** is the certificate issued by Project Manager/ Engineer-in-Charge/ Employer upon correction of defects by the Contractor.
- 1.15. Drawings means the drawings of the Works, as included in the Contract, and any additional and modified drawings issued by (or on behalf of) the Employer in accordance with the Contract, and include calculations and other information provided or approved by the Employer or Employer' Representative for the execution of the Contract.
- 1.16. **Days** are calendar days; months are calendar months.
- 1.17. **A Defect** is any part of the Works not completed in accordance with the Contract.
- 1.18. **The Defects Liability Period** is the period named in the Special Conditions of Contract and calculated from the Completion Date and the Defects Liability Period is the period, through which the performance of the work is established and is as mentioned in the Contract & where the contractor remains responsible for remedying defects.
- 1.19. **The Employer** is the party who will employ the Contractor to carry out the Works, as specified in the SCC.
- 1.20. **Employer's Personnel** means Project Manager or Employer's Representative or Engineer-in-Charge or Engineer, their assistants to whom delegation is made by the them as per the Contract and all other staff, labor and other employees of the Employer engaged in fulfilling the Employer's obligations under the Contract; and any other personnel identified as Employer's Personnel, by a Notice from the Employer to the Contractor.
- 1.21. **Force Majeure** are the situations as defined in Clause 50 of GCC.
- 1.22. **Government** means the government of India, State Government or local government as applicable.
- 1.23. **Government Authority** means any national, state provincial, local or similar government, governmental, regulatory or administrative authority, branch, agency, any statutory body or commission or any non-governmental regulatory or administrative authority, body or other organization to the extent that the rules, regulations and standards, requirements, procedures or Orders of such authority, body or other organization have the force of governing law of the Contract, or any court, tribunal, arbitral or judicial body, or any stock exchange of India or any other country.
- 1.24. **The Initial Contract price** is the Contract Price listed in the Employer's Letter of Acceptance.
- 1.25. **The Intended Completion Date** is the period/time, reckoned from the Start Date, within which it is intended that the Contractor shall complete the Works. The Intended Completion Date is specified in the Special Conditions of Contract. The Intended Completion Date may be revised only by the Employer by issuing an extension of time or an acceleration order.
- 1.26. **Letter of Acceptance** means the formal acceptance of the Employer of the Bid.

- 1.27. **Materials** are all supplies, including consumables, used by the contractor for incorporation in the Works.
- 1.28. **Party** means the Employer or the Contractor, as the context requires and "Parties" mean both the Employer and the Contractor.
- 1.29. **Performance Security** (includes the terms 'Performance Bank Guarantee' or any other specified financial instruments in specific context, means a monetary guarantee to be furnished by the successful
- 1.30. **Bidder or Supplier** in the form prescribed for the due performance of the Contract;
- 1.31. **Permanent Works** means the works of a permanent nature which are to be executed by the Contractor under the Contract.
- 1.32. **Plant** is any integral part of the Works which is to have a mechanical, electrical, electronic or chemical or biological function.
- 1.33. **Project Manager** or Employer's authorized Representative or Engineer-in-Charge or Engineer means the person named by the Employer as such in the Contract (or any other person appointed and notified to the contractor to act in his replacement) who is responsible for supervising the work being performed by the Contractor and administering the contract.
- 1.34. **Section** means a part of the Works specifically identified in Contract as a Section.
- 1.35. **The Site** is the area defined as such in the Special Conditions of Contract.
- 1.36. **Site Investigation Reports/ Data** are those that were included in the bidding document and are factual and interpretative reports/ data about the surface and subsurface conditions at the Site.
- 1.37. **The Special Conditions of Contract** defines the documents and other information which comprise the Contract.
- 1.38. **Specification means** the Specification of the Works included in the Contract and any modification or addition made or approved by the Employer.
- 1.39. **The Start Date** is given in the Special Conditions of Contract. It is the date when the Contractor shall commence execution of the works. It does not necessarily coincide with any of the Site Possession Dates.
- 1.40. **A Subcontractor** is a person or corporate body who has a Contract with the Contractor to carry out a part of the work in the Contract which includes work on the Site.
- 1.41. **Temporary Works** are works designed, constructed, installed, and removed by the Contractor that are needed for construction or installation of the Works.
- 1.42. **Tests after Completion** means the tests specified in the Contract, which are to be carried out after the Works or any Section of Works has been taken over by the Employer.
- 1.43. **Tests for Completion** means the tests specified in the Contract and any other tests as may be agreed by the Employer's Representative and the Contractor or instructed in

writing as a variation, which are to be carried out before the Works or any Section of Works are taken over by the Employer.

- 1.44. **A Variation** is an instruction given by the Employer in writing, which varies the Works.
- 1.45. **The Works** are what the Contract requires the Contractor to construct, install, and handover to the Employer, as defined in the Special Conditions of Contract and includes the Permanent Works and the Temporary Works or either of them as appropriate.
- 1.46. **In writing** or written means hand-written, type-written, printed or electronically made, and resulting in a permanent record.
- 1.47. **Throughout the bidding/** bid documents and the documents forming part of the Contract, the term "bid" "tender" and their derivatives (bidder/tenderer, bid/tender, bidding/tendering, bidding document/bid document/tender document etc.); Bill of Quantity / Schedule of Quantity / Price Schedule & Schedule of items; Bid Security / Earnest Money Deposit are used interchangeably to carry the same meaning unless repugnant to the context.

2. Interpretation

- 2.1. In interpreting these Conditions of Contract, singular also means plural, words indicating one gender include all gender. Headings have no significance. Words have their normal meaning under the language of the Contract unless specifically defined. The Employer will provide instructions clarifying queries about the Conditions of Contract.
- 2.2. If sectional completion is specified in the Special Conditions of Contract, references in the GCC to the Works, the Completion Date, and the Intended Completion Date apply to any Section of the Works (other than references to the Completion Date and Intended Completion Date for the whole of the Works).
- 2.3. In the Contract, except where the context requires otherwise,
 - i. provisions including the word "agree," "agreed," or "agreement" require the agreement to be record in writing;
 - ii. the word "tender" is synonymous with "bid," "tenderer" with "Bidder," and "tender documents" with "Bidding/ Bid Documents";
 - iii. the word 'approved' means approved in writing, including subsequent written confirmation of previous verbal approval and 'approval' means approval in writing, including as aforesaid
 - iv. "person" means a natural person, any form of business organization, incorporated or not, or any other legal entity, including but not limited to a company, a corporation, limited liability partnership, partnership, or proprietorship organization;
 - v. Joint Venture (JV)" means an association with or without a legal personality distinct from that of its members, of more than one entity/ firm where one member has the authority to conduct all business for and on behalf of any and all the members/

partners of the JV, and where the members/ partners of the JV are jointly and severally liable to Employer for the performance of the Contract; "

- vi. "store' wherever appearing, means the place where the Plant and Material supplied under this Contract are stored by the Contractor preferably near to the Site. Such place will be treated as forming part of Site;
 - vii. the marginal words and other headings shall not be taken into consideration in the interpretation of these Conditions;
 - viii. wherever it is mentioned in the Contract that the Contractor shall perform certain work or provide certain facilities or services, it is understood that the Contractor shall do so at his cost and the Contract Price shall be deemed to have included the cost of such performances and provisions so mentioned;
 - ix. in the event of any ambiguity or conflict between the Contract Documents listed in Clause 2.5, the order of precedence shall be the order in which the Contract Documents are listed in Clause 2.5.
- 2.4. The Contractor shall be an independent contractor performing the Contract. The Contract does not create any agency, partnership, joint venture, or other joint relationship between the Parties hereto. Subject to the provisions of the Contract, the Contractor shall be solely responsible for the manner in which the Contract is performed. All employees, representatives, or Subcontractors engaged by the Contractor in connection with the performance of the Contract shall be under the complete control of the Contractor and shall not be deemed to be employees of the Employer, and nothing contained in the Contract or in any subcontract awarded by the Contractor shall be construed to create any contractual relationship between any such employees, representatives, or Subcontractors and the Employer.
- 2.5. The documents stated below form part of the Contract Documents and are meant to complement each other. However, in the event of any conflict arising between the provisions of various documents, the documents shall take precedence in the order provided below:
- i. Agreement
 - ii. Letter of Acceptance, notice to proceed with the works
 - iii. Contractor's Bid
 - iv. Special Conditions of Contract
 - v. General Conditions of Contract, including Appendices
 - vi. Work Requirements
 - vii. Technical Specifications
 - viii. Drawings
 - ix. Bill of Quantities;
 - x. Performance Security Deposit
 - xi. any other document listed in the Special Conditions of Contract as forming part of the Contract
 - xii. Any modification, addendum, pre-bid meeting proceedings

3. Language and Law governing contract

- 3.1. The language of the Contract shall be English.
- 3.2. The law governing the Contract is the Laws of India supplemented by the law and regulations of State of Uttarakhand.

4. Employer's decisions

- 4.1. Except where otherwise specifically stated, the Employer will decide contractual matters between the Employer and the Contractor.

5. Delegation

- 5.1. The Employer may delegate any of his duties and responsibilities to other people except to the Adjudicator after notifying the Contractor and may revoke any delegation after notifying the Contractor.

6. Communications

- 6.1. The address and contact details for communication with the Contractor and Employer shall be as per the details given in Special Conditions of Contract to GCC. Communications between parties which are referred to in the conditions are effective only when in writing. A notice shall be effective only when it is delivered (in terms of Indian Contract Act). The notice sent by fix or other electronic means shall be effective on confirmation of the transmission. The notice sent by registered post or speed post shall be effective on delivery.

7. Subcontracting (Not Allowed)

8. Other Contractors

- 8.1. The Contractor shall cooperate and share the Site with other contractors, public authorities, utilities, and the Employer between the dates given in the Schedule of Other Contractors, as referred to in the Special Conditions of Contract. The Contractor shall also provide facilities and services for them as described in the Schedule. The Employer may modify the Schedule of Other Contractors, and shall notify the Contractor of any such modification.
- 8.2. The Contractor should take up the works in convenient reaches as decided by the Employer to ensure there is least hindrance to the smooth flow of traffic including movement of vehicles and equipment of Other Contractors till the completion of the Works.

9. Personnel

- 9.1. The Contractor shall employ the technical personnel and use the equipment identified in its Bid, to carry out the Works or other personnel and equipment approved by the

Employer. The Employer shall approve any proposed replacement of Technical Personnel and equipment only if their relevant qualifications or characteristics are substantially equal to or better than those proposed in the Bid.

- 9.2. If the Employer asks the Contractor to remove a person who is a member of the Contractor's staff or his work force stating the reasons, the Contractor shall ensure that the person leaves the Site within seven days and has no further connection with the work in the Contract. The Contractor shall then appoint (or cause to be appointed) a replacement.
- 9.3. The Contractor shall not employ any retired Gazetted officer who has worked in the Engineering Department of the State Government and has either not completed two years after the date of retirement or has not obtained State Government's permission for employment with the Contractor.
- 9.4. The Employer may require the Contractor to remove (or cause to be removed) any person employed on the Site or Works, including the Contractor's Representative, who in the opinion of the Employer:
 - a. Persists in any misconduct,
 - b. Is incompetent or negligent in the performance of his duties,
 - c. Fails to conform with any provisions of the Contract, or
 - d. Persists in any conduct which is prejudicial to safety, health, or the protection of the environment.

10. Employer's and Contractor's risks

- 10.1. The Employer carries the risks which this Contract states are Employer's risks, and the Contractor carries the risks which this Contract states are Contractor's risks.

11. Employer's risks

- 11.1. From the Start Date until the Defects Liability Certificate has been issued, the following are Employer's risks:
 - a. The risk of personal injury, death, or loss of or damage to property (excluding the Works, Plant, Materials, and Equipment), which are due to
 - i. use or occupation of the Site by the Works or for the purpose of the Works, which is the unavoidable result of the Works or
 - ii. negligence, breach of statutory duty, or interference with any legal right by the Employer or by any person employed by or contracted to him except the Contractor.
 - b. The risk of damage to the Works, Plant, Materials, and Equipment to the extent that it is due to a fault of the Employer or in the Employer's design, or due to war or radioactive contamination directly affecting the country where the Works are to be executed.
- 11.2. From the Completion Date until the Defects Liability Certificate has been issued, the risk of loss of or damage to the Works, Plant, and Materials is an Employer's risk except loss or damage due to
 - a. Defect which existed on the Completion Date,

- b. an event occurring during Defects Liability Period or
- c. the activities of the Contractor on the Site after the Completion Date

11.3. The Employer is responsible to provide the dispute free site to the Contractor

12. Contractor's risks

12.1. From the Starting Date until the Defects Liability Certificate has been issued, the risks of personal injury, death, and loss of or damage to property (including, without limitation, the Works, Plant, Materials, and Equipment) which are not Employer's risks are Contractor's risks.

13. Insurance:

13.1. The Contractor shall provide, in the joint names of the Employer and the Contractor, insurance cover from the Start Date to the end of the Defects Liability Period, in the amounts and deductibles stated in the SCC for the following events which are due to the Contractor's risks:

- a. loss of or damage to the Works, Plant, and Materials;
- b. loss of or damage to Equipment;
- c. loss of or damage to property (except the Works, Plant, Materials, and Equipment) in connection with the Contract; and
- d. personal injury or death.

13.2. Policies and certificates for insurance shall be delivered by the Contractor to the Employer for his approval before the Start Date. All such insurance shall provide for compensation to be payable to rectify the loss or damage incurred. All payments received from insurers relating to loss or damage shall be held jointly by the Parties and used for the repair of the loss or damage or as compensation for loss or damage that is not to be repaired.

13.3. If the Contractor fails to effect or keep in force any of the insurances referred to in the previous sub-clauses or fails to provide satisfactory evidence, policies or receipts, the Employer may without prejudice to any other right or remedy, effect insurance for the cover relevant to such default and pay the premiums due and recover the same as a deduction from any other monies due to the Contractor. If no payments are due, the payment of the premiums shall be a debt due.

13.4. Alterations to the terms of an insurance shall not be made without the approval of the Employer.

13.5. Both Parties shall comply with any conditions of the insurance policies.

14. Site Investigation Reports

14.1. The Contractor, in preparing the bid, shall be deemed to have relied on site investigation reports/data referred to in the Special Conditions of Contract, supplemented by any information that may have been available to the Bidder. All Site Investigation Reports/Data, information and/or data provided/ to be provided by the Employer as described in the Special Conditions of Contract and/ or Works Requirements shall be deemed to be accurate, except when the Employer expressly states otherwise. All seismic, geological, and other subsurface conditions or concealed conditions on the Site are the

responsibility of the Employer. However, the Contractor is obliged to bring to the notice of the Employer in a timely manner, any errors, or omissions in such information or ambiguities/ discrepancies therein.

- 14.2. The Employer shall be deemed to have and shall have made available to the Contractor for information, all relevant data in the Employer's possession on the topography of the Site and on sub-surface, hydrological, climatic, and environmental conditions at the Site before submission of Bid by the Contractor. The Employer shall promptly make available to the Contractor all such data which comes into the Employer's possession after the submission of Bid by the Contractor.
- 14.3. The Contractor shall be deemed to have satisfied himself as to the suitability and availability of access routes to the Site. The Contractor shall use reasonable efforts to prevent any roads or bridges from being damaged by the Contractor's traffic for movement of Materials, Plant, and Construction Equipment to the Site. These efforts shall include the use of appropriate transportation vehicles and access routes. Any damage or improvement to the transportation system including the roads/bridges/culverts enroute to the project Site during execution of the works shall be borne by the Contractor, who shall make good the same at his own cost.

15. Deleted

16. Queries about the Special Conditions of Contract

- 16.1. The Employer will clarify queries on the Special Conditions of Contract.

17. Contractor to construct the Works

- 17.1. The Contractor shall construct and install the Works in accordance with the Specification and Drawings.

18. Construction Equipment

- a. The Contractor shall provide and install all necessary Construction Equipment required for the execution of the Works under the Contract, at his cost and shall use such methods and appliances for the purpose of all the operations connected with the Work covered by the Contract which shall ensure the completion of Work(s) within the specified Intended Time for Completion. The Construction Equipment shall preferably be new.
- b. The Contractor shall deploy Construction Equipment as per agreed schedule. Provided further that in case of slow rate of progress of Works, the Contractor should supplement the agreed schedule of Contractor's Equipment with additional Construction Equipment so as to ensure completion of Works within Intended Time for Completion at no extra cost to Employer.
- c. The Contractor shall make necessary arrangements for Repair/maintenance of his equipment/machinery utilized at site, by arranging proper workshop, storage facilities, experienced manpower for routine maintenance etc. close to the site locations.
- d. The Contractor shall not remove Construction Equipment, except for purpose of removing it from one part of the Site to another, without written consent of the

Engineer-in-Charge. Provided always that any such approval of shifting of Construction Equipment shall not absolve the Contractor of his obligations for due execution of the Works within the Time for Completion as per the Contract.

19. Materials

- a. The Contractor shall at his own expense provide/arrange all materials required for the bonafide use on works under the Contract.
- b. All materials to be provided by the Contractor shall be in conformity with the Specifications laid down in the Contract and the Contractor shall furnish from time-to-time proof and samples, at his cost, of the materials as may be specified by the Engineer-in-Charge for his approval before use in the Works. The Engineer-in-Charge shall also have powers to have such tests, in addition to those specified in the Contract, as may be required and the Contractor shall carry out the same. The cost of materials consumed in such tests and also expenses incurred thereon shall be borne by the Contractor in all cases and also where such tests which are in addition to those provided in the Contract.
- c. The Engineer-in-Charge or his representative shall be entitled at any time to inspect and examine any materials intended to be used in or on the works, either on the site or at factory or workshop or other place(s) where such materials are assembled, fabricated, manufactured, or at any place where these are lying or from where these are being obtained. For this purpose, the contractor shall afford such facilities as may be required for such inspection and examination.
- d. The Engineer-in-Charge shall have full powers for removal of any or all materials brought to Site by the Contractor, which are not in accordance with the Contract Specifications or samples, approved by him.

20. The Works to be completed by the Intended Completion Date

- 20.1. The Contractor may commence execution of the Works on the Start Date and shall carry out the Works in accordance with the schedule submitted by the Contractor, as updated with the approval of the Employer, and complete them by the Intended Completion Date.

21. Approval by the Employer

- 21.1. The Contractor shall submit Specification and drawings showing the proposed Temporary Works to the Employer, who is to approve them if they comply with the Specifications and Drawings.
- 21.2. The Contractor shall be responsible for the design of Temporary Works.
- 21.3. The Employer's approval shall not alter the Contractor's responsibility for design of the Temporary Works.
- 21.4. The Contractor shall obtain approval of third parties to the design of the temporary Works where required.
- 21.5. All Drawings prepared by the Contractor for the execution of the temporary or permanent Works, are subject to prior approval by the Employer before their use.

- 21.6. The Contractor shall submit all drawings with specifications to the Employer for approval. The Employer shall approve or send it back for modifications within 14 days of receipt. The Contractor shall make the required modifications and send it back to Employer for approval.

22. Safety

- 22.1. The Contractor shall be responsible for the safety of all activities on the Site.
- 22.2. The Contractor shall be responsible for safety of all persons, employed by him on Works, directly or through Sub-Contractors, and shall report accidents to any of them, however, and wherever occurring on Works, to the Employer or the Employer's Representative, and shall make every arrangement to render all possible assistance and to provide prompt and proper medical attention. The compensation for affected workers or their relatives shall be paid by the Contractor in such cases expeditiously in accordance with the Workmen's Compensation Act and other labour laws and regulations.

23. Discoveries

- 23.1. Anything of historical or other interest or of significant value unexpectedly discovered on the Site is the property of the Employer. The Contractor is to notify the Employer of such discoveries and carry out the Employer's instructions for dealing with them. The Contractor shall take reasonable precautions to prevent any damage to these discoveries.

24. Deleted

25. Access to the Site

- 25.1. The Contractor shall allow the Employer and any person authorized by the Employer access to the Site, to any place where work in connection with the Contract is being carried out or is intended to be carried out and to any place where materials or plant are being manufactured / fabricated / assembled for the works.

26. Instructions, Inspections and Audits

- 26.1. The Contractor shall carry out all instructions of the Employer which comply with the applicable laws where the Site is located.
- 26.2. The Contractor shall permit the Employer to inspect the Contractor's accounts, records and other documents relating to the submission of bids and contract performance and to have them audited by auditors appointed by the Employer. The Contractor shall maintain all documents and records related to the Contract for a period of 3 (three) years after completion of the Works. The Contractor shall provide any documents necessary for the investigation of allegations of fraud, collusion, coercion, or corruption and require its employees or agents with knowledge of the Contract to respond to questions from the Employer.

27. Patent Rights

- 27.1. The Contractor shall indemnify the Employer, its representatives or its employees against any action, claim or proceedings relating to infringement or use of any patent rights or design trademark or patented name or other protected rights in respect of the whole or any part of the works and shall pay any royalties or other charges which may be payable in respect of any machine, article or materials or part thereof included in the Contract. In the event of any claim being made or action being brought against the contractor by the

Employer or any agent, servant or employee of the Employer in respect of any such matters as aforesaid, the Contractor shall immediately be notified thereof. Provided that such indemnity shall not apply when such infringement has taken place in complying with the specific directions issued by the Employer.

28. Subsequent Legislation

- 28.1. If, after the deadline for submission of Bid for the contract there occur changes to any National or State Statute, Ordinance or Decree or other Law or any regulation or bye law of any local or other duly constituted authority or introduction of any such state statute, Ordinance, Decree, Law, regulation or bye law which causes additional or reduced cost to the Contractor in execution of the Contract on the direct transactions between the Employer and the Contractor, such additional or reduced cost shall, be determined by the Employer and shall be added to or deducted from the Contract Price and the Employer's Representative shall notify the Contractor accordingly .
- 28.2. Notwithstanding the above, such additional or reduced cost shall not be separately adjusted (paid/recovered) if the same already have been taken into account in the cost indices or prices to the Price Adjustment Formula provided in the Contract.

29. Appointment of the Adjudicator

- 29.1. The Adjudicator shall be appointed by the Employer with the consent of Contractor, at the time of the Employer's issuance of the Letter of Acceptance. If, in the Letter of Acceptance, the Employer does not agree on the appointment of the Adjudicator, the Employer will request the Appointing Authority designated in the SCC, to appoint the Adjudicator within 14 days of receipt of such request.
- 29.2. If the Adjudicator resign or die, or should the Employer and the Contractor agree that the Adjudicator is not functioning in accordance with the provisions of the Contract, a new Adjudicator shall be jointly appointed by the Employer and the Contractor. In case of disagreement between the Employer and the Contractor, within 30 days, the Adjudicator shall be designated by the Appointing Authority at the request of either party, within 14 days of receipt of such request.

30. Procedure for resolution of Disputes:

- 30.1. If the Contractor is not satisfied with the decision taken by the Engineer-in-Charge, the dispute shall be referred by either party to the Adjudicator within 30 days of the notification of the Engineer-in-Charge's decision.
- 30.2. The Adjudicator shall give a decision in writing within 28 days of receipt of notification of a dispute. The Adjudicator shall be paid as specified in the SCC, together with reimbursable expenses of the types specified in the SCC, and the cost shall be divided equally between the Employer and the Contractor, whatever decision is reached by the Adjudicator. If the Adjudicator fails to give its decision within a period of 28 days of the receipt of a notification of a dispute, either party may within 28 days of the expiration of the above-mentioned period or either party is not satisfied with the decision of the Adjudicator, give notice to the Employer of its dissatisfaction. If neither party refer the

dispute to the Employer within 30 days, the Adjudicator's decision will be final and binding.

- 30.3. If any party refer the dispute to the Employer, then the Employer shall give a decision in writing within 28 days of receipt of notification of a dispute.
- 30.4. If the Contractor is not satisfied with the decision taken by the Employer, the dispute shall be referred by the Contractor to the Arbitrator. The Arbitration shall be conducted in accordance with the arbitration procedure stated in the Special Conditions of Contract.

B. Time Control

31. Program

- 31.1. Within the time stated in the Special Conditions of Contract, the Contractor shall submit to the Employer for approval a Program showing the general methods, arrangements, order, and timing for all the activities in the Works.
- 31.2. The Contractor shall submit the list of equipment and machinery being brought to the Site, the list of key personnel being deployed, the list of machinery/equipments being placed in field laboratory and the location of field laboratory along with the Programme as per requirement and as per direction of Employer. The Employer shall cause these details to be verified at each appropriate stage of the Programme. The employer shall communicate the selected bidder if the field lab is required at later stage.
- 31.3. An update of the Program shall be a program showing the actual progress achieved on each activity and the effect of the progress achieved on the timing of the remaining work, including any changes to the sequence of the activities.
- 31.4. The Contractor shall submit to the Employer for approval an updated Program at intervals no longer than the period stated in Special Conditions of Contract. If the Contractor does not submit an updated Program within this period, the Employer may withhold the amount stated in the Special Conditions of Contract from the next payment certificate and continue to withhold this amount until the next payment after the date on which the overdue Program has been submitted.
- 31.5. Payment certificate:
 - i. The Contractor shall submit to the Employer's Representative monthly statements of the estimated value of the work completed less the cumulative amount certified previously.
 - ii. The Employer's Representative shall check the Contractors' monthly statement within 30 days and certify the amount to be paid to the Contractor after taking into account any credit or debit for the month in question in respect of materials for the works in the relevant amounts and under conditions set forth in Contract.
 - iii. The value of work executed shall be determined by the Employer's Representative.
 - iv. The value of work executed shall comprise the value of the quantities of the items in the Bill of quantities (BOQ)
 - v. The value of work executed shall include the valuation of variations and Compensation Events.

- vi. The Employer's Representative may exclude any item certified in a previous certificate or reduce the proportion of any item previously certified in any certificate in the light of later information.
 - vii. The Employer's Representative may by any interim monthly bill make any correction or modification in any previous interim monthly bill which has been issued by him, and shall have authority, if any work is not being carried out to his satisfaction, to omit or reduce the value of such work in any Interim Payment Certificate
- 31.6. The Employer's approval of the Program shall not alter the Contractor's obligations. The Contractor may revise the Program and submit it to the Employer again at any time. A revised Program is to show the effect of Variations and Compensation Events.

32. Extension of the Intended Completion Date

- 32.1. The Employer shall extend the Intended Completion Date if a Compensation Event occurs or a Variation is issued which makes it impossible for Completion to be achieved by the Intended Completion Date without the Contractor taking steps to accelerate the remaining work, which would cause the Contractor to incur additional cost.
- 32.2. The Employer shall decide whether and by how much to extend the Intended Completion Date within 21 days of the Contractor asking the Employer for a decision upon the effect of a Compensation Event or Variation and submitting full supporting information. If the Contractor has failed to give early warning of a delay or has failed to cooperate in dealing with a delay, the delay by this failure shall not be considered in assessing the new Intended Completion Date.

33. Acceleration

- 33.1. When the Employer wants the Contractor to finish before the Intended Completion Date, the Employer shall obtain priced proposals for achieving the necessary acceleration from the Contractor. If the Employer accepts these proposals, the Intended Completion Date shall be adjusted accordingly and confirmed by both the Employer and the Contractor.
- 33.2. If the Contractor's priced proposals for an acceleration are accepted by the Employer, they are incorporated in the Contract Price and treated as a Variation.

34. Delays ordered by the Employer

- 34.1. The Employer may instruct the Contractor to delay the start or progress of any activity within the Works.

35. Management meetings

- 35.1. Either the Employer or the Contractor may require the other to attend a management meeting. The business of a management meeting shall be to review the progress achieved and the plans for remaining work and to deal with matters raised in accordance with the early warning procedure.
- 35.2. The Employer shall record the business of management meetings and provide copies of the record to those attending the meeting and to the Contractor. The responsibility of the parties for actions to be taken is to be decided by the Employer either at the management

meeting or after the management meeting and stated in writing to be distributed to all who attended the meeting.

36. Early Warning

- 36.1. The Contractor shall warn the Employer at the earliest opportunity of specific likely future events or circumstances that may adversely affect the quality of the work, increase the Contract Price, or delay the execution of the Works. The Employer may require the Contractor to provide an estimate of the expected effect of the future event or circumstance on the Contract Price and Completion Date. The estimate shall be provided by the Contractor as soon as reasonably possible.
- 36.2. The Contractor shall cooperate with the Employer in making and considering proposals for how the effect of such an event or circumstance can be avoided or reduced by anyone involved in the work and in carrying out any resulting instruction of the Employer.

37. Suspension of Works

- 37.1. The Contractor shall on the order of the Engineer-in-charge suspend the progress of the Works or any part thereof for such time or times and in such manner as the Engineer-in-Charge may consider necessary and shall during such suspension properly protect and secure the work so far as is necessary in the opinion of the Engineer-in-charge. If such suspension is:
 - a. provided for in the Contract, or
 - b. necessary for the proper execution of the Works or by reason of weather conditions or by some default on the part of the Contractor, or
 - c. necessary for the safety of the Works or any part thereof,then the Contractor shall not be entitled to extra costs (if any) incurred by him during the period of suspension of the works; but in the event of any suspension ordered by the Engineer-in-Charge for reasons other than aforementioned and when each such period of suspension exceeds 14 days, the Contractor shall be entitled to such extension of Time for Completion of the Works as the Engineer-in-Charge may consider proper having regard to the period or periods of such suspensions and to such compensation as the Engineer-in-Charge may consider reasonable cost incurred by the Contractor during the periods of such suspension.
- 37.2. If the progress of Works or any part thereof is suspended on the order of the Engineer-in-Charge for more than three months at a time the Contractor may serve a written notice on the Engineer-in-Charge requiring permission within 15 days from the receipt thereof to proceed with the Works or that part thereof in regard to which progress is suspended and if such permission is not granted within that time the Contractor by a further written notice so served may (but is not bound to) elect to treat the suspension where it affects part only of the Works as an omission of such part or where it affects the whole of the Works as an abandonment of the Contract by the Employer.

C. Quality Control

38. Bench Marks

- 38.1. The Engineer-in-Charge shall establish/indicate the bench marks and convey the same in writing to the Contractor immediately after Letter of Acceptance. Engineer-in-Charge shall be responsible for correctness of such data/bench marks conveyed to the Contractor.
- 38.2. The Contractor shall be responsible for the true and proper setting out of all the Works (in relation to the aforementioned bench marks) for the correctness of the location, grades, dimensions and alignment of all components of the Works; and for the provisions of all instruments, appliances, materials and labour required in connection therewith. If at any time during the progress of work, any error shall appear or arise in the location, grades, dimensions, or alignment of any part of the Work, the Contractor on being required to do so by the Engineer-in-Charge shall, subject to Clause (a) hereof, at his own expense, rectify such error to the satisfaction of the Engineer-in-Charge.
- 38.3. The Contractor shall afford all reasonable facilities and assistance to the Engineer-in-Charge for checking the setting out and lines and grades established by the Contractor. The checking of any setting out or of any line and grade by the Engineer-in-Charge shall not in any way relieve the Contractor of his responsibility for the correctness thereof. If at any time during the progress of work, any error shall appear or arise in the location, grades, dimensions, or alignment of all parts of the Site including special and/or temporary rights-of-way to the Contractor, free from all encumbrances. If possession of a part of site is not given by the date stated in the Contract, the Employer is deemed to have delayed the start of the relevant activities and this will be a Compensation Event, under the Contract.

39. Identifying defects

- 39.1. The Employer shall check the Contractor's work and notify the Contractor of any Defects that are found. Such checking shall not affect the Contractor's responsibilities. The Employer may instruct the Contractor to search for a Defect and to uncover and test any work that the Employer considers may have a Defect.

40. Tests

- 40.1. For carrying out mandatory tests as prescribed in the specifications, the Contractor shall establish field laboratory at the location decided by the Employer with full equipment as per Special Conditions of Contract. The Contractor shall be solely responsible for:
 - a. Carrying out the mandatory tests prescribed in the Specifications, and
 - b. For the correctness of the test results, whether performed in his laboratory or elsewhere.
- 40.2. If the Employer instructs the Contractor to carry out a test not specified in the Specification to check whether any work has a Defect and the test shows that it does, the Contractor shall pay for the test and any samples. If there is no Defect, the test shall be a Compensation Event.
- 40.3. In case field lab is not established the employer may get the test conducted at NABL approved lab and the cost of such test shall be borne by the contractor.

41. Correction of defects

- 41.1. The Employer shall give notice to the Contractor of any Defects before the end of the Defects Liability Period, which begins at Completion and is defined in the Special Conditions of Contract. The Defects Liability Period shall be extended for as long as Defects remain to be corrected.
- 41.2. Every time, notice of a Defect is given, the Contractor shall correct the notified Defect within the length of time specified by the Employer's notice at the Contractor's own cost.
- a. The "Defects Liability Period" for the works shall be the period stated in the Special Conditions of Contract, following the Completion Date.
 - b. The Contractor shall be responsible for fulfilling of all his obligations and making good as soon as practicable at his expenses any Defect in or damage to any section or part of the Works which may appear or occur during the Defects Liability Period and which arises either from quality deficiency in design or materials or workmanship or from any act or omission, of the Contractor. Repair, modification, or replacement of work or part thereof as required to make good such Defect or deficiency or damage shall constitute complete fulfillment of the Contractor's obligations under the Contract and upon such repair, modification, or replacement pursuant hereto or upon the expiration of the Defects Liability Period whichever is later, all such obligations shall terminate.
 - c. Until the expiry of the Defects Liability Period, the Contractor shall have the right of access subject to the Employer's permission during normal working hours, at his own risk and expense, by himself or his duly authorized representatives, whose names shall have previously been communicated in writing to the Employer for the purpose of inspecting, working to undertake repairs/corrective actions and performance thereof. Subject to the Employers approval, which shall not be unreasonably withheld, the Contractor may at his own risk and expense make any test which it considers desirable.
 - d. If effective steps for repair, modification or replacement of Defects, deficiencies or damages pursuant hereto are not taken up within two weeks of the date of notification thereof by the Employer to the Contractor or if such repair, modification or replacement is not completed with reasonable promptitude by the Contractor at its own expense, the Employer shall be entitled to undertake the same to be made good by other agencies or otherwise and deduct expenses from any sum that may by then or at any time thereafter becomes due to the Contractor under the Contract or from the amount released by encashing the bank guarantees provided by the Contractor under the Contract or recover otherwise from the Contractor including from money due to the Contractor on any other accounts whatsoever.
 - e. If during the Defects Liability Period any portion of the Works is found defective or deficient in any manner and is repaired/rectified/replaced pursuant to the defect liability provisions of the Contract, the Defects Liability Period for such portion of the Works, shall, notwithstanding anything to the contrary contained herein, be

operative for a further period of 12 months from the date of such repair/rectification/replacement.

42. Uncorrected defects

- 42.1. If the contractor has not corrected a defect to the satisfaction of the Engineer-in-Charge within the time specified in the Engineer's notice, the Engineer-in Charge will get the defect corrected through a debit agency and retention money/performance security of the contractor shall be utilized for this purpose.

D. Cost Control

43. Bill of Quantities (BOQ)

- 43.1. The BOQ shall contain items for the construction, installation, testing, and commissioning work to be done by the Contractor.
- 43.2. The BOQ is used to calculate the Contract Price. The Contractor is paid for the quantity of the work done at the rate in the BOQ for each item.

44. Contract Price

- 44.1. In the case of an admeasurement contract, the Bill of Quantities shall contain priced items for the Works to be performed by the Contractor. The Bill of Quantities is used to calculate the Contract Price. The Contractor will be paid for the quantity of the work accomplished at the rate in the Bill of Quantities for each item.
- 44.2. In the case of a lump sum contract, the Activity Schedule shall contain the priced activities for the Works to be performed by the Contractor. The Activity Schedule is used to monitor and control the performance of activities on which basis the Contractor will be paid. If payment for Materials on Site shall be made separately, the Contractor shall show delivery of Materials to the Site separately on the Activity Schedule.

45. Variations

- 45.1. The Employer shall have power to order the Contractor to do any or all of the following as considered necessary or advisable during the progress of the work by him
- a. Increase or decrease of any item of work included in the Bill of Quantities (BOQ);
 - b. Omit any item of work;
 - c. Change the character or quality or kind of any item of work;
 - d. Change the levels, lines, positions and dimensions of any part of the work;
 - e. Execute additional items of work of any kind necessary for the completion of the works; and
 - f. Change in any specified sequence, methods or timing of construction of any part of the work.
 - g. If the final quantity of the work done differs from the quantity in the Bill of Quantities for the particular item by more than the percentage specified in Special Conditions of Contract, provided the change exceeds the percentage of the Initial Contract Price, as specified in the Special Conditions of Contract, the Engineer-in-Charge shall adjust the rate to allow for the change, as under:

- i. If the quantity of work executed exceeds the quantity of the item in BOQ beyond the higher specified limit, the Engineer- in-Charge shall fix the rate to be applied for the additional quantity of the work executed.
- ii. If the quantity of work executed is less than the quantity of the item in BOQ and is lesser than the lower specified limit, the Engineer- in-Charge shall fix the initially contracted rate to be applied for whole of the quantity of the work so executed.

- 45.2. The variation from a BOQ item to a Non BOQ item is not permitted.
- 45.3. All the variations shall be included in updated Programs produced by the Contractor.
- 45.4. The Contractor shall not be entitled to additional payment for costs that could have been avoided by giving early warning.
- 45.5. The Contractor shall be bound to carry out the work in accordance with any instructions in this connection, which may be given to him in writing by the Employer and such alteration shall not vitiate or invalidate the contract.
- 45.6. Variations shall not be made by the Contractor without an order in writing by the Employer, provided that no order in writing shall be required for increase or decrease in the quantity of an item appearing in the BOQ so long as the work executed conforms to the approved drawings.
- 45.7. The Contractor shall promptly carry out the Variation and failing to do so, the Employer will carryout such variation works, at the risk and cost of the Contractor.
- 45.8. Due to variations, the terms and conditions of this Contract, including any modification with respect to Performance Security Deposit may be made by written agreement between the Parties.

46. Payments for Variations

- 46.1. Under no circumstances the Contractor shall suspend the work on the plea of non-settlement of rates for items falling under this Clause.
- 46.2. The payments for variations shall be as specified in SCC.

47. Cash Flow Forecasts

- 47.1. When the Program is updated, the Contractor shall provide the Employer with an updated cash flow forecast.

48. Submission of bills for payment

- 48.1. The Contractor shall submit to the Employer monthly bills of the value of the work completed less the cumulative amount paid previously.
- 48.2. The Employer shall check the Contractor's monthly statement and certify the amount to be paid to the Contractor.
- 48.3. The Employer shall check the Contractor's bill and determine the value of the work executed which shall comprise of (i) value of the quantities of the items in the BOQ completed and (ii) valuation of Variations and Compensation Events.

- 48.4. The Employer may exclude any item paid in a previous bill or reduce the proportion of any item previously paid in the light of later information.

49. Payments

- 49.1. Payments shall be adjusted for deductions for advance payments and retention, other recoveries in terms of the contract and taxes, at source, as applicable under the law. The Employer shall pay the Contractor the amounts certified by the Engineer within 30 days of the date of each certificate.
- 49.2. Payments during the installation phase shall be released upon commissioning of each instrument. The Contractor may submit Running Account (RA) bills to the Authority upon commissioning of individual instruments; payments will be made only after successful testing and acceptance of the instrument. Payments during the AMC period shall be made to the Contractor on a half-yearly (semi-annual) basis.
- 49.3. Items of the Works for which no rate or price has been entered in the BOQ, will not be paid for by the Employer and shall be deemed covered by other rates and prices in the Contract.

50. Force Majeure

- 50.1. For the purposes of this Contract, "Force Majeure" means an event which is beyond the reasonable control of a Party, is not foreseeable, is unavoidable, and makes a Party's performance of its obligations hereunder impossible or so impractical as reasonably to be considered impossible under the circumstances, and subject to those requirements, includes, but is not limited to, war, riots, civil disorder, earthquake, fire, explosion, storm, flood or other adverse weather conditions, strikes, lockouts or other industrial action confiscation or any other action by Government agencies.
- 50.2. Force Majeure shall not include (i) any event which is caused by the negligence or intentional action of a Party or such Party's Experts, sub-contractors or agents or employees, nor (ii) any event which a diligent Party could reasonably have been expected to both take into account at the time of the conclusion of this Contract, and avoid or overcome in the carrying out of its obligations hereunder.
- 50.3. Force Majeure shall not include insufficiency of funds or failure to make any payment required hereunder.
- 50.4. The failure of a Party to fulfill any of its obligations hereunder shall not be considered to be a breach of, or default under, this Contract insofar as such inability arises from an event of Force Majeure, provided that the Party affected by such an event has taken all reasonable precautions, due care and reasonable alternative measures, all with the objective of carrying out the terms and conditions of this Contract.
- 50.5. A Party affected by an event of Force Majeure shall continue to perform its obligations under the Contract as far as is reasonably practical, and shall take all reasonable measures to minimize the consequences of any event of Force Majeure.

- 50.6. A Party affected by an event of Force Majeure shall notify the other Party of such event as soon as possible, and in any case not later than fourteen (14) calendar days following the occurrence of such event, providing evidence of the nature and cause of such event, and shall similarly give written notice of the restoration of normal conditions as soon as possible.
- 50.7. Any period within which a Party shall, pursuant to this Contract, complete any action or task, shall be extended for a period equal to the time during which such Party was unable to perform such action as a result of Force Majeure.
- 50.8. During the period of their inability to perform the Services as a result of an event of Force Majeure, the Contractor, upon instructions by the Employer, shall either:
- a. demobilize, in which case the Contractor shall be reimbursed for additional costs they reasonably and necessarily incurred, and, if required by the Employer, in reactivating the Work; or
 - b. continue with the Work to the extent reasonably possible, in which case the Contractor shall continue to be paid under the terms of this Contract and be reimbursed for additional costs reasonably and necessarily incurred.
- 50.9. In the case of disagreement between the Parties as to the existence or extent of Force Majeure, the matter shall be settled according to Clauses GCC 30.

51. Deleted

52. Tax

- 52.1. The rates quoted by the Contractor in the Bill of Quantities forming part of the Contract shall be deemed to be exclusive of GST and all other duties, taxes, royalties and other levies of central and state government, local bodies and authorities.

53. Deleted

54. Deleted

55. Retention

- 55.1. The Employer shall retain from each payment due to the Contractor the proportion as stated in the SCC until Completion of the whole of the Works.
- 55.2. The total amount retained shall be repaid to the Contractor when the Defects Liability Period has passed and the Employer has certified that all Defects notified by the Employer to the Contractor before the end of this period have been corrected. The Contractor may substitute retention money with an "on demand" bank guarantee.

56. Liquidated damages

- 56.1. The Contractor shall pay liquidated damages to the Employer at the rate per day stated in the Special Conditions of Contract for each day that the Completion Date is later than the Intended Completion Date (for the whole of the works or the milestone as stated in the Special Conditions of Contract). The total amount of liquidated damages shall not exceed the amount defined in the Special Conditions of Contract. The Employer may deduct

liquidated damages from payments due to the Contractor. Payment of liquidated damages does not affect the Contractor's liabilities.

- 56.2. The Employer may, without prejudice to any other method of recovery, deduct the amount of such liquidated damages from any sum due, or to become due to the Contractor or from Security Deposit or any other dues from government or semi government bodies within the State of Uttarakhand.
- 56.3. If the Intended Completion Date is extended after liquidated damages have been paid, the Employer shall correct any overpayment of liquidated damages by the Contractor by adjusting the next payment of bill.

57. Deleted

58. Advance Payments

- 58.1. Advance Payments shall be as per Uttarakhand's State rule

59. Performance Security:

- 59.1. The Performance Security Deposit shall be provided to the Employer no later than the date specified in the Letter of Award and shall be issued for an amount and in the form and type of instrument as specified in the Special Condition of Contract. The Security deposit shall be valid until a date 60 days from the date of expiry of CAMC Period.

60. Day works

- 60.1. If applicable, the Day works rates in the Contractor's Bid shall be used for small additional amounts of work only when the Employer has given written instructions in advance for additional work to be paid for in that way.
- 60.2. All work to be paid for as Dayworks shall be recorded by the Contractor on forms approved by the Employer. Each completed form shall be verified and signed by the Employer within two days of the work being done.
- 60.3. The Contractor shall be paid for Day works subject to obtaining signed Day works forms.

61. Cost of Repairs:

- 61.1. Loss or damage to the Works or Materials to be incorporated in the Works between the Start Date and the end of the Defects Liability Period shall be remedied by the Contractor at the Contractor's cost if the loss or damage arises from the Contractor's acts or omissions.

E. Finishing the Contract

62. Completion

- 62.1. The Contractor shall request the Employer to issue a Certificate of Completion of the Works and the Employer will do so upon deciding that the Work is completed.

63. Taking over

- 63.1. The Employer shall take over the Site and the Works within seven days of issuing a certificate of Completion.

64. Final account

- 64.1. The Contractor shall supply to the Employer a detailed account of the total amount that the Contractor considers payable under the Contract before the end of the Defects

Liability Period. The Employer shall issue a Defect Liability Certificate and certify any final payment that is due to the Contractor within [90 days] of receiving the Contractor's account if it is correct and complete. If it is not, the Employer shall issue within [90 days] a schedule that states the scope of the corrections or additions that are necessary. If the Final Account is still unsatisfactory after it has been resubmitted, the Employer shall decide on the amount payable to the Contractor and make payment within [60 days] of receiving the Contractor's revised account.

65. Deleted

66. Use of Explosive material

- 66.1. For the use of explosive material for excavation in hard rock, the Contractor has to follow the prevailing rules in this regard of Government of India & of Government of Uttarakhand and also has to get license from the appropriate authority for the use of explosive material.

67. Termination

- 67.1. The Employer or the Contractor may terminate the Contract if the other party causes a fundamental breach of the Contract.
- 67.2. Fundamental breaches of Contract include, but shall not be limited to the following:
- a) the Contractor stops work for 28 days when no stoppage of work is shown on the current Program and the stoppage has not been authorized by the Employer;
 - b) the Employer instructs the Contractor to delay the progress of the Works and the instruction is not withdrawn within 60 days;
 - c) The Contractor becomes bankrupt or goes into liquidation other than for a reconstruction or amalgamation;
 - d) a payment due to the Contractor is not paid by the Employer within 90 days of the date of the submission of the Bill by Contractor;
 - e) the Employer gives Notice that failure to correct a particular Defect is a fundamental breach of Contract and the Contractor fails to correct it within a reasonable period of time determined by the Employer;
 - f) the Contractor does not maintain a security which is required;
 - g) the Contractor has delayed the completion of works by the number of days for which the maximum amount of liquidated damages can be paid as defined in the Special Conditions of Contract; and
 - h) the Contractor fails to provide insurance cover as required under Clause 13;
 - i) if the Contractor, in the judgment of the Employer has engaged in corrupt or fraudulent practices in competing for or in the executing the Contract. For the purpose of this paragraph: "corrupt practice" means the offering, giving, receiving or soliciting of anything of value to influence the action of a public official in the procurement process or in contract execution. "Fraudulent practice" means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of the Borrower, and includes collusive practice among Bidders (prior to or after Bid submission) designed to establish Bid prices at artificial non-competitive levels and to deprive the Borrower of the benefits of free and open competition."
 - j) if the Contractor fails to set up a laboratory with all equipment as mentioned in Forms to ITB;
 - k) if the Contractor fails to deploy machinery and equipment or personnel as specified in

- the Conditions of Contract at the appropriate time;
- l) if the Contractor fails to pay EPF, ESI contribution as required under prevailing laws;
 - m) if the Contractor engages child labour in violation of prevailing laws;
 - n) if the Contractor fails to ensure that there is no gender bias in engagement of labour and other employees and in payment of wages and he discriminates against female workers;
 - o) any other fundamental breaches as specified in the Special Conditions of Contract.
- 67.3. When either party to the Contract gives notice of a breach of contract to the Employer for a cause other than those listed under Sub Clause 67.2 above, the Employer shall decide whether the breach is fundamental or not.
- 67.4. Notwithstanding the above, the Employer may terminate the Contract for convenience.
- 67.5. If the Contract is terminated, the Contractor shall stop work immediately, make the Site safe and secure and leave the Site as soon as reasonably possible.

68. Payment upon Termination

- 68.1. If the Contract is terminated because of a fundamental breach of Contract by the Contractor, the Employer shall prepare bill for the value of the work done less advance payments received up to the date of the bill, less other recoveries due in terms of the contract, less taxes due to be deducted at source as per applicable law and less the percentage to apply to the work not completed as indicated in the Special Conditions of Contract. Additional Liquidated Damages shall not apply. If the total amount due to the Employer exceeds any payment due to the Contractor the difference shall be a debt payable to the Employer. The Employer may also debar and blacklist the Contractor for applying for future tender/ITB/contractor selection processes as indicated in SCC.
- 68.2. If the Contract is terminated at the Employer's convenience or because of a fundamental breach of Contract by the Employer, the Employer shall prepare bill for the value of the work done, the reasonable cost of removal of Equipment, repatriation of the Contractor's personnel employed solely on the Works, and the Contractor's costs of protecting and securing the Works and less advance payments received up to the date of the certificate, less other recoveries due in terms of the Contract, and less taxes due to be deducted at source as per applicable law and make payment accordingly.

69. Property

- 69.1. All materials on the Site, Plant, Equipment, Temporary Works and Works are deemed to be the property of the Employer, if the Contract is terminated because of a contractor's default. It will be transferred to the Contractor after setting of the liabilities arise due to termination.

70. Performance Certificate & Site Clearance

70.1. Performance Certificate

Performance Certificate shall be issued by Employer's Representative upon completion of all the Contractor's obligations, stating the date on which the Contractor completed his obligations under the Contract.

The Employer's Representative shall issue the Performance Certificate within 28 days of expiry of CAMC period including remedying any Defects to be carried after completion of Works. A copy of the Performance Certificate shall be retained by the Employer's Representative with duly acknowledge receipt from the Contractor. Only the Performance Certificate shall be deemed to constitute acceptance of the Works.

70.2. Clearance of Site

Upon receiving the Completion Certificate, the Contractor shall remove any remaining Contractor's Equipment, surplus material, wreckage, rubbish and Temporary Works from the Site.

If any of these items have not been removed within 28 days by the Contractor after the issue of Completion Certificate, the Employer may dispose off remaining items. The Employer shall be entitled to be paid the costs incurred in connection with, or attributable to, such sale or disposal and restoring the Site.

Any balance of the moneys from the sale shall be paid to the Contractor. If these moneys are less than the Employer's costs, the Contractor shall pay the outstanding balance to the Employer

71. Release from performance

- 71.1. If the Contract is frustrated by any event entirely outside the control of either the Employer or the Contractor the Employer shall certify that the Contract has been frustrated. The Contractor shall make the Site safe and stop work as quickly as possible after receiving this certificate and shall be paid for all work carried out before receiving it and for any work carried out afterwards to which commitment was made.
- 71.2. Death or permanent invalidity of the Contractor: The Contractor shall indicate his nominee for the Contract at the time of signing of Contract. If a Contractor dies during the currency of the Contract or becomes permanently incapacitated, and his/her nominee are not willing to complete the Contract, the Contract shall be closed without levying any damages/compensation as provided in this Contract.
- 71.3. However, if the nominee expresses his/her intention to complete the balance work and the competent authority is satisfied about the competence of the nominee, then the competent authority shall enter into a fresh agreement for the remaining work strictly on the same terms and conditions, under which the Contract was initially awarded.

72. Foreclosure of Contract

- 72.1. In case, the Employer decides to abandon or reduce the scope of the works under the Contract for reason whatsoever and does not require the whole or any part of the works to be carried out, the Engineer-in-charge shall give notice in writing to that effect to the Contractor and the Contractor shall have no claim to any payment of compensation or otherwise whatsoever on account of any profit or advantage which he might have derived from execution of the works in full but which he could not derive in consequence of the fore-closure of the whole or part of the Contract.
- 72.2. The Contractor shall be paid at Contract rates for full amount of the works executed at site and in addition, a reasonable amount as certified by the Engineer-in- charge for the

items hereunder mentioned which could not be utilized on the work to the full extent because of the foreclosure.

- i. Any expenditure incurred on preliminary works, e.g. temporary access roads, temporary labour huts, staff quarter & site office, storage accommodation and water storage tanks;
- ii. The Employer shall have the option to take over Contractor's materials or any part thereof, either brought to Site or ordered for which the Contractor is legally bound to accept delivery from suppliers provided however that the quantity of such materials is not in excess of reasonable requirement of works. The decision of Engineer-in-charge in respect of reasonable quantity required for works will be final and conclusive (for incorporation in or incidental to the work), provided however, the Employer shall be bound to take over, the material or such portions thereof as the Contractor does not desire to retain. The cost shall, however, take into account purchase price, cost of transportation and deterioration or damage which have been caused to materials whilst in the custody of the Contractor.
- iii. For Contractor's materials not retained by the Employer, reasonable cost for transporting such materials from Site to Contractor's stores or to his other works, whichever is less will be paid by the Employer. If materials are not transported to either of the said places, no cost of transportation shall be payable.
- iv. Reasonable compensation for transfer of Construction Equipment from Site to Contractor's permanent stores or to his other works whichever is less provided that such Construction Equipment is not in excess or reasonable requirement of works. If Construction Equipment are not transported to either of the said places, no cost of transportation shall be payable.
- v. The reasonable cost of transportation of all the Contractor's staff and workmen employed on or in connection with the works at time of such fore closure of Contract.
 - a. The Contractor shall, if required by the Engineer-in-charge, furnish to him books of account, wage books, time sheets and other relevant documents as may be necessary to enable him to certify the reasonable amount payable under this condition.
 - b. Provided always that against any payments due form Employer under this clause Employer shall be entitled to be credited with any outstanding balances due from the Contractor and any other sums which at the date of termination were recoverable by the Employer from the Contractor under terms of the Contract.

73. Closure of Contract

73.1. The Contract shall stand closed upon:

- i. Successful performance of all obligation by both parties, including completion of defect liability obligations and final payment.
- ii. Termination and settlements after that, if any, as per clause 67 above.

F. Other Conditions of Contract

74. Labour:

- 74.1. The Contractor shall, unless otherwise provided in the Contract, make his own arrangements for the engagement of all staff and labour, local or other, and for their payment, housing, feeding and transport.
- 74.2. The Contractor shall, if required by the Employer, deliver to the Employer a return in detail, in such form and at such intervals as the Employer may prescribe, showing the staff and the numbers of the several classes of labour from time to time employed by the Contractor on the Site and such other information as the Employer may require.

75. Care of Works and Indemnity

- a) From commencement to completion of the Works as a whole, the Contractor shall take full responsibility for the care thereof and for taking precautions to prevent loss or damage except the loss/damage occasioned by Employer's Risks or Force Majeure Risks, which are not insurable as per GCC hereof. He shall be liable for any damage or loss that may happen to the Works or any part thereof except the loss/damage occasioned by Employer's Risks or Force Majeure Risks. Any such loss or damage shall be restored in good order and condition and in conformity in every respect with the requirements of the Contract and instructions of the Engineer-in-Charge at Contractor's cost. The re-doing or repair of Permanent Works occasioned by Employer's Risks or Force Majeure Risks which are not insurable shall be paid by the Employer as per variation order provided such a loss or damage could not have been foreseen or avoided by a prudent person.
 - i. Neither party to the Contract shall be liable to the other in respect of any loss or damage which may occur or arise out of "Force Majeure" to the Works or any part thereof or to any material or Plant at Site but not incorporated in the Works or to any person or anything or material whatsoever of either party and the either party shall bear losses and damages in respect of their manpower and materials. As such liability of either party shall include claims/compensation of the third party also.
 - ii. Provided, however, in an eventuality as mentioned in sub-clause (b)(i) above, the following provisions shall also have effect:
- b) The Contractor shall, as may be directed in writing by the Engineer-in-Charge proceed with the erection and completion of the works under and in accordance with the Contract; and
- c) The Contractor shall, as may be directed in writing by the Engineer-in-Charge, re-execute the works lost or damaged, remove from the Site any debris and so much of the works as shall have been damaged. The cost of such re- execution of the works shall be ascertained in the same manner as for deviations and this shall be paid separately to the Contractor.

Provided always that the Contractor shall, at his own cost, repair and make good so much of the loss or damage as has been by any failure on his part to perform his obligations under the Contract or not taking precautions to prevent loss or damage or minimize the amount of such loss or damage.

- d) The Contractor shall indemnify and keep indemnified the Employer against all losses and claims for death, injuries or damage to any person or any property whatsoever which may arise out of or in consequence of the construction and maintenance of works during the Intended Time for Completion and also against all claims, demands, proceedings, damages, costs, charges and expenses whatsoever in respect of or in relation thereto, and such liabilities shall include claims/compensations of the third party. Provided the same is attributable to the contractor.

The Employer shall not be liable for in respect of any damages or compensation payable to any workman or other person in the employment of the Contractor or any subcontractor, other than death or injury resulting from any act or default of the Employer, his agents or Employer's Personnel. The Contractor shall indemnify and keep indemnified the Employer against all such damages and compensation, other than those for which the Employer is liable as aforesaid, and against all claims, proceedings, damages costs, charges and expenses whatsoever in respect thereof or in relation thereto.

76. Compliance with labour regulations:

During continuance of the contract, the Contractor and his sub-contractors shall abide at all times by all existing labour enactments and rules made there under, regulations, notifications and bye laws of the State or Central Government or local authority and any other labour law (including rules), regulations, bye laws that may be passed or notification that may be issued under any labour law in future either by the State or the Central Government or the local authority. The Contractor shall keep the Employer indemnified in case any action is taken against the Employer by the competent authority on account of contravention of any of the provisions of any Act or rules made there under, regulations or notifications including amendments. If the Employer is caused to pay or reimburse, such amounts as may be necessary to cause or observe, or for non-observance of the provisions stipulated in the notifications/bye laws/Acts/Rules/regulations including amendments, if any, on the part of the Contractor, Employer shall have the right to deduct any money due to the Contractor including his amount of security deposit. The Employer shall also have right to recover from the Contractor any sum required or estimated to be required for making good the loss or damage suffered by the Employer.

The employees of the Contractor and the Sub-Contractor in no case shall be treated as the employees of the Employer at any point of time.

Full compliance of statutory requirements apart, the Contractor shall pay rates of wages and observe conditions of labour not less favourable than those established for the trade or the industry where the work is carried out. The Contractor shall make himself aware of all labour regulations and their impact on the cost and build up the same in the Contract

Price. During the Contract Period, unless and otherwise provided in the Contract, no extra amount in this regard shall be payable to the Contractor, for whatsoever reason.

In the event of default being made in the payment of any money in respect of wages of any person employed by the Contractor or any of its sub-contractors of any tier in and for carrying out of this Contract and if a claim therefore is filed in the office of the Labour Authorities and proof thereof is furnished to the satisfaction of the Labour Authorities, the Employer may, failing payment of the said money by the Contractor, make payment of such claim on behalf of the Contractor to the said Labour Authorities and any sums so paid shall be recoverable by the Employer from the Contractor.

It shall be the responsibility of the Contractor to pay EPF, ESI contributions as required under prevailing rates. The Contractor shall bear all such cost and it would be deemed to be included in the Contract Price.

The employment of child labour is prohibited in the Contract. The Contractor shall comply with the Child Labour (Prohibition and Regulation) Act, 1986.

The Contractor shall ensure that there is no gender bias in engagement of labour and other personnel and shall not make any discrimination against female employees. The Contractor shall comply with the Equal Remuneration Act, 1979 and Maternity Benefit Act, 1961.

The Contractor shall have a Labour Welfare Organisation which shall be responsible for labour welfare and compliance with prevalent labour laws, statutes and guidelines. In this context, the Contractor is also required to familiarize himself with Labour Welfare Rules of the state and comply with the provisions of the Building and other Construction Workers (Regulation and Employment & Conditions of Service), Act 1996 and the Cess Act, 1996.

The Contractor shall provide and maintain at his own expense, all necessary accommodation and welfare facilities as per prevailing labour and welfare laws for his staff and labour.

The Contractor shall prepare and submit compliance reports of adherence to labour laws as and when directed by the Employer.

77. Protection of Environment:

The contractor shall take all reasonable steps to protect the environment on and off the Site and to avoid damage or nuisance to persons or to property of the public or others resulting from pollution, noise or other causes arising as a consequence of his methods of operation. During continuance of the contract, the contractor and his sub-contractors shall abide at all times by all existing enactments on environmental protection and rules made there under, regulations, notifications and bye-laws of the State or Central Government, or local authorities and any other law, bye-law, regulations that may be passed or notification that may be issued in this respect in future by the State or Central Government or the local authority.

78. Ecological Balance

78.1. The Contractor shall be required to ensure that there shall be no indiscriminate felling of trees by him or his labourers or their family members and he will be solely responsible for their acts in this regard. The Contractor shall try to maintain ecological balance by preventing deforestation, water pollution and defacing of natural landscape in the vicinity of work areas. The Contractor shall so conduct his construction operations as to prevent an unnecessary destruction of, scarring or defacing the natural surroundings in the vicinity of the work area. In order to maintain the ecological balance, the Contractor shall specifically observe the following instructions:

- a) Where unnecessary destruction, scarring, damage, or defacing may occur as a result of the Contractor's operation, the same shall be repaired, replanted or otherwise corrected at the Contractor's expense. The Contractor will prevent scattering of rocks and other debris outside the work areas. All work areas shall be smoothed and graded in a manner to conform to the natural appearance of the landscape as directed by the Engineer-in-Charge.
- b) All trees and shrubs, which are not specifically required to be cleared or removed for construction purposes, shall be preserved and shall be protected from any damage that may be caused by the Contractor's construction operation and Construction Equipment. The removal of trees or shrubs will be permitted only after prior approval by the Engineer-in-charge. Special care shall be exercised where trees or shrubs are exposed to injuries by Construction Equipment, blasting, and excavating, dumping, chemical damage or other operation and the Contractor shall adequately protect such trees by use of protective barriers or other methods approved by the Engineer-in-Charge. Trees shall not be used for anchorage.
- c) The Contractor's construction activities shall be performed by methods that will prevent entrance or accidental spillage of solid matter contaminants, debris and other objectionable pollutants and wastage into river. Pollutants and wastes shall be disposed of in a manner and at sites approved by the Engineer in-Charge. The Contractor shall fully comply with Water (Prevention and Control of Pollution) Act, 1974 section-33(A), as may be amended from time to time.
- d) Burning of materials resulting from clearing of tree, bush, combustible construction materials, and rubbish may be permitted only when atmospheric conditions for burning are considered favourable.

In the conduct of construction activities and operation of Construction Equipment, the Contractor shall utilise such practicable methods and devices as are reasonably available to control, prevent and otherwise minimize air pollution. The contractor shall fully comply with Air (Prevention and Control of Pollution) Act, 1981 section -31(A), as may be amended from time to time.

79. Drawings, Photographs and CD of videography of the Works

79.1. The Contractor shall provide as built drawings, photographs and videography of the construction works during the construction and after the construction to the Employer.

- 79.2. If the Contractor does not submit the drawings, photographs and videography to the Employer, the Employer shall withhold the 02 % of contract amount.
- 79.3. The Contractor shall do photography/video photography of the site firstly before the start of the Work, secondly midway in the execution of different stages of Work and lastly after the completion of the Work. No separate payment will be made to the Contractor for this.
- 79.4. The Contractor shall not disclose details of Drawings furnished to him and works on which he is engaged without the prior approval of the Employer in writing. No photograph of the Works or any part thereof or plant employed thereon shall be taken or permitted by the Contractor to be taken by any of his employees without the prior approval of the Employer in writing. No photographs/video photography shall be published or otherwise circulated without the approval of the Employer in writing.

SECTION VIII: SPECIAL CONDITIONS OF CONTRACT

GCC Clause Reference	The following documents are also part of the Contract:		
	A. General		
[1], 6.1	The details of Employer are: Employer: Chief Executive Officer, UCADA Address : Uttarakhand Civil Aviation Development Authority (UCADA) Sahastradhara Heliport, Mussoorie by pass, P.O. kulhan Dehradun-248001,Uttarakhand(India) E-mail : ucadadoon@gmail.com		
[1]	The Intended Period Completion Date for the whole of the Works shall be 02 months.		
[1]	The Start Date shall be intimated on the letter of award.		
13.1	The minimum insurance amounts and deductibles shall be:		
	SN	Type of Cover	Minimum cover for Insurance
	1.	for loss or damage to the Works, Plant and Materials	50 lacs +20%
	2.	for loss or damage to Equipment (except the Works, Plant, Materials, and Equipment) in connection with Contract	Full replacement cost
	3.	for loss or damage to property (except the Works, Plant, Materials, and Equipment) in connection with Contract	Full replacement cost
	4.	Personal injury or death insurance (a) for Third Party (b) for Contractor’s employees or labour.	In accordance with the statutory requirements applicable to State of Uttarakhand @5 lacs per person
29.1 & 29.2	Appointing Authority for the Adjudicator: Chief Executive Officer, UCADA		

30.2	<p>Adjudicator shall be paid as per law</p> <p>Reimbursable expenses payable if applicable shall be paid as per law</p>
30.4	<p>The procedure for arbitration shall be as follows:</p> <ol style="list-style-type: none"> In case of dispute or difference arising between the Employer and the Contractor relating to any matter arising out of or connected with this agreement it shall be settled in accordance with the Arbitration and Conciliation Act 1996. The disputes or differences shall be referred to a Arbitral Tribunal. One Arbitrator shall be appointed by each party and the Presiding Arbitrator shall selected by both arbitrator with consensus, failing such the Presiding Arbitrator shall be appointed by IRC/IEI or any organization mentioned in agreement. Arbitration proceedings shall be held at Dehradun, Uttarakhand, India and the language of the arbitration proceedings and that of all documents and communications between the parties shall be English. The decision of the majority of arbitrators shall be final and binding upon both parties. The cost and expenses of Arbitration proceedings will be as determined by the arbitral tribunal. However, the expenses incurred by each party in connection with the preparation, presentation etc. of its proceedings as also the fees and expenses paid to the arbitrator appointed by such party or on its behalf shall be borne by each party itself. [Calculation of fees and payment schedule for resolution of dispute between Arbitrator shall be as per Govt. Order letter No. 471/III (2)-19-41 ,रिट याचिकाद्वः2013, Dehradun Dt 28-01-2020 Government of Uttarakhand, PWD section-2, Dehradun, and its amendments from time to time, which shall be the part of this Contract.] <p>Performance under the contract shall continue during the arbitration proceedings and payments due the Contractor by the Employer shall not be withheld, unless they are the subject matter of the arbitration proceedings</p>
	<p>B. Time Control</p>
31.1	<p>The Contractor shall submit for approval a Program for the Works within 07 days from the date of the Letter of Acceptance.</p> <p>The Program shall also include the Schedule of Key and Critical Equipment to be deployed on the work as per agreed program of construction.</p>
31.4	<p>The period between Program updates is 20 days, if required. The amount to be withheld for late submission of an updated Program as per authority discretion</p>

	C. Quality Control
40.1	The laboratory to be established at as communicated by authority, if required
41	<p>The Defects Liability Period is: 12 months and shall be extended for as long as Defects remain to be corrected.</p> <p>Defect liability period and AMC shall run concurrently with each other for 12 months</p>
45.1, 46.2	<p>The Payments for Variations shall be calculated as follows:</p> <ol style="list-style-type: none"> Payment for increase in the quantities of an item in the BOQ up to [10%] of that provided in the Bill of Quantities in any of the items shall be made at the rates quoted by the Contractor. For quantities in excess of [110%] of the tendered quantity of an item as given in the BOQ, the Contractor shall be paid at the rate entered in or derived from in the Schedule of Rates (applicable for the area of the work and current at the time of award of contract) or the BOQ rate provided by the contractor, (whichever is lesser) over the current Uttarakhand Public Works Department Schedule of Rates prevalent at the time of award of Contract. If the rates for additional, substituted or altered item of work cannot be determined either as mentioned above, the Contractor shall be requested to submit his quotation for the items supported by analysis of the rate or rates claimed, within 7 days. If there is no rate for the additional, substituted or altered item of the work in the BOQ, efforts would be made to derive the rates from market survey and quotations received and the payment would be made at the derived rate for the item by the Employer. If the Contractor's quotation is determined unreasonable, the Employer may order the Variation and make a change to the Contract Price which shall be based on Employer's own forecast of the effects of the Variation on the Contractor's costs.
55	<p>(Retention will be @ 05 % per running bill up to max 05% of Contract Price)</p> <p>50% of the Retention money will be released on issuance of Completion Certificate to the Contractor and the remaining 50% of the Retention money will be released within 30 days from the date of expiry of Defects Liability Period.</p>
56	The liquidated damages for each milestone will be calculated and withhold 0.05% percentage of the final Contract Price per day. If the final milestone has been completed within the prescribed timelines, the liquidated damages so withhold will be paid to contractor. If the final

	milestone has not been completed within the stipulated timelines, the liquidated damages withhold so for will be forfeited. The maximum amount of liquidated damages for the whole of the Works is 10% of the final Contract Price.
59	<p>The Performance Security shall be in any of the following form viz. Bank Guarantee issued by any a Nationalised/Scheduled Bank or any other form acceptable to the Employer.</p> <p>The performance security will be 05% percent of the accepted Contract Price.</p> <p>Performance Security Deposit will be released on issuance of Completion Certificate after expiry of AMC period.</p>

SECTION IX: FORMATS

Format of Bank Guarantee for Security Deposit

To:

[name of Employer]

[address of Employer]

WHEREAS [name and address of Contractor] (hereinafter called "the Contractor") has undertaken, in pursuance of Contract No. dated to execute [name of Contract and brief description of Works] (hereinafter called "the Contract");

AND WHEREAS it has been stipulated by you in the said Contract that the Contractor shall furnish you with a Bank Guarantee by a recognized bank for the sum specified therein as security for compliance with his obligations in accordance with the Contract;

AND WHEREAS we have agreed to give the Contractor such a Bank Guarantee;

NOW THEREFORE we hereby affirm that we are the Guarantor and responsible to you, on behalf of the Contractor, up to a total of Rs. [amount of guarantee] _Rupees [in words], and we undertake to pay you, upon your first written demand and without cavil or argument, any sum or sums within the limits of [amount of guarantee] as aforesaid without your needing to prove or to show grounds or reasons for your demand for the sum specified therein.

We hereby waive the necessity of your demanding the said debt from the Contractor before presenting us with the demand.

We further agree that no change or addition to or other modification of the terms of the Contract or of the Works to be performed there under or of any of the Contract documents which may be made between you and the Contractor shall in any way release us from any liability under this guarantee, and we hereby waive notice of any such change, addition or modification.

This guarantee shall be valid until 60 days from the date of expiry of the CAMC Period.

Signature and seal of the guarantor

Name of Bank

Address

Date

Any Modification, Addendum, Pre-Bid Meeting Proceedings

Bid No.				
Date and time of Pre-bid meeting				
SN	Section, Clause No, Page No.	Description as per Bid document	Query raised	Remarks / Clarification/ Modification made