



TAMILNADU MEDICAL SERVICES CORPORATION LIMITED
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BID REFERENCE:333/LAB/DME/TNMSC/ENGG/2018, DT:25.05.2018

**TENDER FOR CONSTRUCTION, TESTING, COMMISSIONING AND
VALIDATION OF TB CONTAINMENT LABORATORY TO GOVT.
HOSPITAL OF THORACIC MEDICINE, TAMBARAM SANATORIUM,
CHENNAI**

LAST DATE OF RECEIPT OF TENDER: 19.06.2018 at 11.00 AM
NOT TRANSFERABLE

ABSTRACT

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**TENDER FOR CONSTRUCTION, TESTING, COMMISSIONING AND
VALIDATION OF TB CONTAINMENT LABORATORY TO GOVT. HOSPITAL
OF THORACIC MEDICINE, TAMBARAM SANATORIUM, CHENNAI**

BID REFERENCE	:	333/LAB/DME/TNMSC/ ENGG/2018, DT.25.05.2018
DATE OF COMMENCEMENT OF SALE OF BIDDING DOCUMENT	:	31.05.2018
LAST DATE FOR SALE OF BIDDING DOCUMENT	:	18.06.2018
LAST DATE AND TIME FOR RECEIPT OF BIDS	:	19.06.2018, 11.00 AM
TIME AND DATE OF OPENING OF BIDS	:	19.06.2018, 12.00 Noon
PLACE OF OPENING OF BIDS	:	Tamilnadu Medical Services Corp. Ltd 417, Pantheon road, Egmore, Chennai 600 008.
ADDRESS FOR COMMUNICATION	:	Tamilnadu Medical Services Corp. Ltd 417, Pantheon road, Egmore, Chennai 600 008.

SECTION I : INVITATION FOR BIDS (IFB)

SECTION I : INVITATION FOR BIDS (IFB)

Sealed Tenders in duplicate will be received till **11.00 AM** on **19.06.2018** by the **General Manager (Equip), Tamilnadu Medical Services Corp. Ltd., Chennai for tender for Construction, Testing, Commissioning and Validation of TB Containment Laboratory to Govt. Hospital of Thoracic Medicine, Tambaram Sanatorium, Chennai.**

1. Interested eligible Bidders may obtain further information from the office of the Tamilnadu Medical Services Corp. Ltd, 417, Pantheon Road, Egmore, Chennai 600 008. Tamilnadu. India.

2. A complete set of bidding documents may be purchased by any interested eligible bidder on submission of a written application to the above office and upon payment of a non-refundable fee as indicated below in the form of a Demand Draft in favour of **Tamilnadu Medical Services Corp. Ltd., payable at Chennai.**

3. The bidding document may be obtained from the office of **Tamilnadu Medical Services Corp. Ltd., 417, Pantheon Road, Egmore, Chennai – 600 008**, during office hours namely, from **10.00 hours to 17.00 hours** on all working days either in person or by post.

- | | | | |
|----|---|---|--|
| a) | Price of bidding document
(Non-refundable) | : | Rs.5,725/-
(Inclusive of all taxes)
(Alternatively, the tender
document can be downloaded
from www.tenders.tn.gov.in
and TNMSC website www.tnmsc.Com at free of cost) |
| b) | Postal charges, inland | : | Rs.200/- (extra) |
| c) | Date of commencement of
Sale of bidding document | : | 31.05.2018 |
| d) | Pre-bid meeting | : | 07.06.2018 at 11.00 AM |
| e) | Last date for sale of Bidding
Document | : | 18.06.2018 |
| f) | Last date and time for Receipt
of bids | : | 19.06.2018, 11.00 AM |
| g) | Time and date of Opening
of Technical bids | : | 19.06.2018, 12.00 Noon |

- h) Place of opening of bids : Tamilnadu Medical Services Corp. Ltd.,
417, Pantheon Road,
Egmore,
Chennai 600 008.
- i) Address for communication : Tamilnadu Medical Services Corp. Ltd.,
417, Pantheon Road,
Egmore,
Chennai 600 008.

4. The bidders, who have downloaded the bid documents, shall be solely responsible for checking these websites for any addendum/amendment issued subsequently to the bid document and take into consideration the same while preparing and submitting the bids.

5. All bids must be accompanied by a bid security as specified in the bid document and must be delivered to the above office at the date and time indicated above.

6. Bids will be opened in the presence of Bidders' representative who choose to attend on the specified date and time.

SECTION II : INSTRUCTION TO BIDDERS

SECTION II: INSTRUCTIONS TO BIDDERS

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A. INTRODUCTION

1. Eligible Bidders

1.1 Manufacturers or their authorised representatives / direct importers are eligible to participate in this tender.

1.2 Bidders 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 Purchaser to provide consulting services for the preparation of the design, specifications, and other documents to be used for the procurement of the goods to be purchased under this Invitation of Bids.

1.2.1. The GST registered bidders are only eligible to participate in the tender.

1.3 Government-owned enterprises may participate only if they are legally and financially autonomous, if they operate under commercial law, and if they are not a dependent agency of the *Purchaser*.

2. Cost of Bidding

2.1 The Bidder shall bear all costs associated with the preparation and submission of its bid and *Tamilnadu Medical Services Corp. Ltd., Chennai*, hereinafter referred to as "*the Purchaser*", will in no case be responsible or liable for these costs, regardless of the conduct or outcome of the bidding process.

B. THE BIDDING DOCUMENTS

3. Contents of Bidding Documents

3.1 The goods required, bidding procedures and contract terms are prescribed in the Bidding documents. In addition to the Invitation for Bids, the Bidding Documents include:

- a. Instruction to Bidders (ITB);
- b. General Conditions of Contract (GCC);
- c. Special Conditions of Contract (SCC);
- d. Schedule of Requirements;
- e. Technical Specifications / Qualification criteria;
- f. Bid Form and Price Schedules;
- g. Bid Security form
- h. Contract Form;
- i. Performance Security Form;
- j. Performance statement and
- k. Manufacturer's Authorisation Form

3.2 The Bidder is expected to examine all instructions, forms, terms and specifications in the Bidding Documents. Failure to furnish all information required by the Bidding Documents or submission of a bid not substantially responsive to the Bidding Documents in every respect will be at the Bidder's risk and may result in rejection of its bid.

4. Clarification of Bidding Documents

4.1 A prospective Bidder requiring any clarification of the Bidding Documents may notify the **Purchaser** in writing or by telex or cable at the **Purchaser's** mailing address indicated in the Invitation for Bids. The **Purchaser** will respond in writing to any request for clarification of the Bidding Documents which it receives not later than 7 days prior to the deadline for submission of bids prescribed by the **Purchaser**. Written copies of the **Purchaser's** response (including an explanation of the query but without identifying the source of inquiry) will be sent to all prospective Bidders which have received the bidding documents.

4.2 Pre-Bid Meeting:

- a) The bidder or his official representative is invited to attend a pre-bid meeting which will take place at the office of *Tamilnadu Medical Services Corporation Limited, 417, Pantheon Road, Chennai –8, India* on **07.06.2018 at 11.00 AM**.
- b) The purpose of the meeting will be to clarify issues and to answer questions on any matter that may be raised at that stage.
- c) The Bidder is requested to submit any questions in writing or by cable to reach the **Purchaser** not later than **3 days before the meeting**.
- d) Minutes of the meeting, including the text of the questions raised (without identifying the source of enquiry) and the responses given will be transmitted without delay to all purchasers of the bidding documents.
- e) Non-attendance at the pre-bid meeting will not be a cause for disqualification of a bidder.

5. Amendment of Bidding Documents

5.1 At any time prior to the deadline for submission of bids, the **Purchaser** may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective bidder, modify the Bidding Documents by an amendment.

5.2 All prospective bidders who have received the Bidding Documents will be notified of the amendment in writing or by cable and will be binding on them.

5.3 In order to allow prospective bidders reasonable time in which to take the amendment into account in preparing their bid, the **Purchaser** may, at its discretion, extend the deadline for the submission of bids.

C. PREPARATION OF BIDS

6. Language of Bid

6.1 The Bid prepared by the bidder and all correspondence and documents relating to the bid exchanged by the Bidder and the *Purchaser*, shall be written in the English language. Supporting documents and printed literature furnished by the Bidder may be written in another language provided they are accompanied by an accurate translation of the relevant passages in the English language in which case, for purposes of interpretation of the Bid, the English translation shall govern.

7. Documents Comprising the Bid

7.1 The bid prepared by the Bidder shall comprise the following components:

- (a) a Bid Form and Price Schedule completed in accordance with ITB Clauses 8, 9 and 10;
- (b) documentary evidence established in accordance with ITB Clause 11 that the Bidder is eligible to bid and is qualified to perform the contract if its bid is accepted;
- (c) documentary evidence established in accordance with ITB Clause 12 that the goods and ancillary services to be supplied by the Bidder shall conform to the Bidding Documents; and
- (d) Bid Security furnished in accordance with ITB Clause 13.

8. Bid Form

8.1 The Bidder shall complete the Bid Form and the appropriate Price Schedule furnished in the bidding documents, indicating for the goods to be supplied, a brief description of the goods, their country of origin, quantity and prices.

9. Bid Prices

9.1 The Bidder shall indicate on the Price Schedule the unit prices and total Bid prices of the goods it proposes to supply under the Contract.

9.2 Prices indicated on the Price Schedule shall be entered separately in the following manner:

- (i) The price of the goods, quoted ex-factory, ex-show-room, ex-warehouse, or off-the-shelf, or delivered, as applicable, including all duties and sales and other taxes already paid or payable:
 - a. on components and raw material use in the manufacture or assembly of the goods quoted ex-factory; or
 - b. on the previously imported goods of foreign origin quoted ex-showroom, ex-warehouse or off-the-shelf.

(ii) any purchaser-country sales and other taxes which will be payable on the goods if this contract is awarded;

(iii) charges for inland transportation, insurance and other local costs incidental to delivery of the goods to their final destination; and

(iv) the cost of incidental services listed in Clause 7 of the Special Conditions of Contract.

9.3 The Bidders separation of the price components in accordance with ITB Clause 9.2 above will be solely for the purpose of facilitating the comparison of bids by the *Purchaser* and will not in any way limit the *Purchaser's* right to contract on any of the terms offered.

9.4 Fixed price: Prices quoted by the Bidder shall be fixed during the Bidder's performance of the contract and not subject to variation on any account. A bid submitted with an adjustable price quotation will be treated as non-responsive and rejected, pursuant to ITB Clause 22.

9.5. a) The bidder should furnish the CIF value of the imported component with Customs duty separately in the price bid in addition to the other breakup value for packaging & Forwarding, Inland transport, Installation and commissioning and other incidental charges as specified in SCC 7 under GCC 12

b) The bidders are advised to take in to consideration the savings available due to abolition of CVD and SAD for imports now due to GST implementation, and consider the benefits out of it as a reduction, while arriving at their bid price.

c) Similarly, the benefits that could be availed out of High Sea Sales/ Sales in course of import should also be considered as a reduction while arriving at their bid price.

10. Bid Currencies

10.1 Prices shall be quoted in Indian Rupees.

11. Documents establishing bidder's eligibility and qualifications

11.1 Pursuant to ITB Clause 7, the bidder shall furnish, as part of its bid, documents establishing the bidder's eligibility to bid and its qualifications to perform the Contract if its bid is accepted.

11.2 The documentary evidence of the Bidder's qualifications to perform the Contract if its bid is accepted, shall establish to the *Purchaser's* satisfactions.

(a) that, in the case of a Bidder offering to supply goods under the contract which the Bidder did not manufacture or otherwise produce, the Bidder has been

duly authorized (as per authorization form in Section XI) by the goods manufacturer or produce to supply the goods in India.

(b) that the bidder has the financial, technical and production capability necessary to perform the Contract and meets the criteria outlined in the qualification requirements specified in Section VI-A. To this end, all bids submitted shall include the following information:

(i) The legal status, place of registration and principle place of business of the company or firm or partnership, etc;

(ii) Details of experience and past performance of the bidder on equipment offered and on those of similar nature within the past five years and details of current contracts in hand and other commitments (suggested proforma given in Section X)

11.3 The bidder should furnish the GST registration no. for supply and services and the code no. for the goods quoted.

11.4 The bidder should furnish the details for Bank name, Branch name, Account no., IFSC Code and a copy of cancelled cheque leaf.

12. Documents establishing goods conformity to bidding documents

12.1 Pursuant to ITB Clause 7, the Bidder shall furnish, as part of its bid, documents establishing the conformity to the bidding documents of all goods and services which the bidder proposes to supply under the contract.

12.2 The documentary evidence of conformity of the goods and services to the bidding documents may be in the form of literature, drawings and data and shall consist of:

(a) a detailed description of the essential technical and performance characteristics of the goods;

(b) a list giving full particulars, including available sources and current prices, of all spare parts, special tools, etc., necessary for the proper and continued functioning of the goods for a period of three years, following commencement of the goods used by the *Purchaser*; and

(c) an item-by-item commentary on the *Purchaser's* Technical Specifications demonstrating substantial responsiveness of the goods and services to those specifications or a statement of deviations and exceptions to the provisions of the Technical Specifications.

12.3 For the purpose of the commentary to be furnished pursuant to ITB Clause 12.2 (c) above, the Bidder shall note that standards for workmanship, material and equipments and references to brand names or catalogue numbers designated by the *Purchaser* in its Technical Specifications are intended to be descriptive only and not restrictive. The Bidder may substitute alternative standards, brand names and/or

catalogue numbers in its bid, provided that it demonstrates to the *Purchaser*'s satisfaction that the substitutes are substantially equivalent or superior to those designated in the Technical Specifications.

13. Bid Security

13.1 Pursuant to ITB Clause 7, the Bidder shall furnish, as part of its bid, bid security for the amount as indicated in Section V schedule of requirements.

13.2 The bid security is required to protect the *Purchaser* against risk of Bidders conduct which would warrant the security's forfeiture, pursuant to ITB Clause 13.7.

13.3 The bid security shall be in Indian Rupees and shall be in one of the following forms :

- a. Deleted
- b. A Banker's cheque, or demand draft obtained from any scheduled bank in favour of TamilNadu Medical Services Corporation Limited, payable at Chennai. The validity of the Demand Draft/Banker's Cheque furnished for Bid Security should be not less than 15 days.

13.4 Any bid not secured in accordance with ITB Clauses 13.1 and 13.3 above will be rejected by the *Purchaser* as non-responsive, pursuant to ITB Clause 22.

13.5 Unsuccessful bidders bid security will be discharged/returned as promptly as possible but not later than 30 days after the expiration of the period of bid validity prescribed by the *Purchaser*, pursuant to ITB Clause 14.

13.6 The successful bidder's bid security will be discharged upon the bidders signing the contract, pursuant to ITB Clause 30, and furnishing the security, pursuant to ITB Clause 31.

13.7 The bid security may be forfeited:

- (a) If a bidder withdraws its bid during the period of bid validity specified by the Bidder on the Bid form;

(or)

- (b) In case of a successful bidder, if the bidder fails:
 - (i) to sign the contract in accordance with ITB Clause 30; or
 - (ii) to furnish performance security in accordance with ITB Clause 31.

14. Period of Validity of Bids

14.1 Bids shall remain valid for 90 days after the date of bid opening prescribed by the *Purchaser*, pursuant to ITB Clause 17. A bid valid for a shorter period may be rejected by the *Purchaser* as non-responsive.

14.2 In exceptional circumstances, the *Purchaser* may solicit the bidders consent to an extension of the period of validity. The request and the responses thereto shall be made in writing (or by cable or telex). The bid security provided under ITB Clause 13 shall be suitably extended. A bidder may refuse the request without forfeiting its bid security. A bidder granting the request is not required or permitted to modify its bid.

15. Format and Signing of Bid

15.1 The bidder shall prepare the bid technical bid (Cover A) and the price bid (Cover B) and placed in separately sealed covers clearly marking “Technical bid” and “Price bid” as appropriate.

15.2 The bid shall be typed or written in indelible ink and shall be signed by the Bidder or a person or persons duly authorised to bind the Bidder to the Contract. The letter of authorisation shall be indicated by written power-of-attorney accompanying the bid. All pages of the bid, except for unamended printed literature, shall be initialed by the person or persons signing the bid.

15.3 Any interlineations, erasures or overwriting shall be valid only if they are initialed by the person or persons signing the bid.

D. SUBMISSION OF BIDS

16. Sealing and Marking of Bids

16.1 The bidder shall seal the “**Technical bid**” and “**Price bid**” in separate inner envelopes only making the envelopes as “Technical bid” and Price bid”. He shall then place these two inner envelopes in an outer envelope.

16.2 The inner envelopes and outer envelopes and the cover shall be:

- (a) addressed to the *Purchaser* at the following address:

Tamilnadu Medical Services Corp. Ltd.,
417, Pantheon Road,
Egmore,
Chennai 600 008.

- (b) bear the project name, the invitation for bids (IFB) number and the words “**Do not open before 12.00 Noon on 19.06.2018**”.

16.3 The inner envelopes shall indicate the name and address of the bidder to enable the bid to be returned unopened in case it is declared “late”.

16.4 If the cover containing the outer envelope is not sealed and marked as required by ITB Clause 16.2, the *Purchaser* will assume no responsibility for the bid’s misplacement or premature opening.

16.5 Telex, cable or facsimile bids will be rejected.

17. Deadline for Submission of Bids

17.1 Bids must be received by the *Purchaser* at the address specified under ITB Clause 16.2 not later than the time and date specified in the Invitation of Bids (Section I). In the event of the specified date for the submission of bids being declared a holiday for the *Purchaser*, the bids will be received up to the appointed time on the next working day.

17.2 The *Purchaser* may, at its discretion, extend this deadline for submission of bids by amending the bid documents in accordance with ITB Clause 5, in which case all rights and obligations of the purchasers and bidders previously subject to the deadline will thereafter be subject to the deadline as extended.

18. Late Bids

18.1 Any bid received by the *Purchaser* after the deadline for submission of bids prescribed by the *Purchaser*, pursuant to ITB Clause 17, will be rejected and/or returned unopened to the Bidder.

19. Modification and Withdrawal of Bids

19.1 The bidder may modify or withdraw its bid after the bids submission, provided that written notice of the modification or withdrawal is received by the *Purchaser* prior to the deadline prescribed for submission of bids.

19.2 The bidders modification or withdrawal notice shall be prepared, sealed, marked and dispatched in accordance with the provisions of ITB Clause 16. A withdrawal notice may also be sent by telex or cable but followed by a signed confirmation copy, post marked not later than the deadline for submission of bids.

19.3 No bid may be modified subsequent to the deadline for submission of bids.

19.4 No bid may be withdrawn in the interval between the deadline for submission of bids and the expiration of the period of bid validity specified by the bidder on the bid form. Withdrawal of a bid during this interval may result in the bidders forfeiture of its bid security, pursuant to Clause 13.7

E. BID OPENING AND EVALUATION

20. Opening of Bids by Purchaser

20.1 The *Purchaser* will open only the Technical bids (Cover A) of all bids, in the presence of bidder's representatives who choose to attend, at **12.00 Noon on 19.06.2018** at the following location:

**Tamilnadu Medical Services Corp. Ltd.,
417, Pantheon Road,
Egmore,
Chennai 600 008.**

The bidder's representatives who are present shall sign a register evidencing their attendance. In the event of the specified date of bid opening being declared a holiday for the *Purchaser*, the bids shall be opened at the appointed time and location on the next working day.

20.2 The bidders names, modifications, bid withdrawals and the presence or absence of the requisite bid security and such other details as the *Purchaser*, at its discretion, may consider appropriate will be announced at the opening. No bid shall be rejected at bid opening, except for late bids, which shall be returned unopened to the bidder pursuant to ITB Clause 18.

20.3 The *Purchaser* will prepare minutes of the bid opening.

20.4 The “**Price Bid**” (**Cover B**) will be opened after evaluation of “**Technical bids**” (**Cover A**) and the date and time will be intimated to bidders whose bids are responsive and who are selected by the *Purchaser*.

21. Clarification of Bids

21.1 During evaluation of bids, the *Purchaser* may, at its discretion, ask the bidder for clarification of its bid. The request for clarification and the response shall be in writing. Unless the purchaser asks for change in price due to the clarifications sought the bidder is not permitted to alter the price furnished in the “**Price bid**” “**Cover B**”. The change in price shall be submitted in a separately sealed covers with marking in the cover “**supplemental price bid**” before opening of the “**original price bid**”.

22. Preliminary Examination

22.1 The *Purchaser* will examine the bids to determine whether they are complete, whether any computational errors have been made, whether required sureties have been furnished, whether the documents have been properly signed, and whether the bids are generally in order. Bids from Representatives, without proper authorisation from the manufacturer as per Section XI, shall be treated as non-responsive.

22.2 Arithmetical errors will be rectified on the following basis. If there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail and the total price shall be corrected. If the supplier does not accept the correction of errors, its bid will be rejected. If there is a discrepancy between words and figures, the amount in words will prevail.

22.3 The **Purchaser** may waive any minor informality or non-conformity or irregularity in a bid which does not constitute a material deviation, provided such a waiver does not prejudice or affect the relative ranking of any bidder.

22.4 Prior to the detailed evaluation, pursuant to Clause ITB 23, the **Purchaser** will determine the substantial responsiveness of each bid to the bidding documents. For purposes of these clauses a substantially responsive bid is one which conforms to all the terms and conditions of the bidding documents without material deviations. Deviations from or objections or reservations to critical provisions such as those concerning Performance Security (GCC Clause 6). Warranty (GCC Clause 14), Force Majeure (GCC Clause 24), Applicable law (GCC Clause 29) and Taxes and Duties (GCC Clause 31) will be deemed to be material deviation. The purchasers determination of a bids responsiveness is to be based on the contents of the bid itself without recourse to extrinsic evidence.

22.5 A bid determined as not substantially responsive will be rejected by the **Purchaser** and may not subsequently be made responsive by the bidder by correction of non-conformity.

23. Evaluation and Comparison of Bids

23.1 The **Purchaser** will evaluate and compare bids previously determined to be substantially responsive, pursuant to ITB Clause 22.

23.2 The purchasers evaluation of a bid will take into account, in addition to the bid price (ex-factory/ex-warehouse/off-the-shelf price of the goods offered from within India, such price to include all costs as well as duties and taxes paid or payable on components and raw material incorporated or to be incorporated in the goods, and excise duty on the finished goods, if payable) and price of incidental services, the following factors, in the manner and to the extent indicated in ITB Clause 23.3 and in the technical specifications:

1. i) cost of inland transportation, insurance and other costs within India incidental to the delivery of goods to their final destination;
ii)The comprehensive annual maintenance charges for a period of 7 years subsequent to free guarantee maintenance period of 3 years.
2. delivery schedule offered in the bid;
3. deviations in payment schedule from that specified in the special conditions of contract

4. the availability in India of spare parts and after-sales services for the equipment offered in the bid.
 - i) **Manufacturer Bidders:-**
 - a. An undertaking for the uninterrupted supply of adequate spares for atleast a period of 10 years shall be furnished.
 - b. Availability/ establishment of after sales service facility atleast in 4 regions of Tamil Nadu to ensure uninterrupted after sales service during warranty and maintenance period shall be confirmed. The details of service facility available / proposed to be set up shall be furnished in their bid.
 - ii) **Non-Manufacturer Bidders:-**
 - a. The bidder shall furnish an undertaking for the uninterrupted supply of adequate spares for atleast a period of 10 years with the backup undertaking from their manufacturer.
 - b. Availability/ establishment of after sales service facility atleast in 4 regions of Tamil Nadu to ensure uninterrupted after sales service during warranty and maintenance period shall be confirmed. The details of service facility available / proposed to be set up shall be furnished in their bid.

23.3 Pursuant to ITB Clause 23.2 the following evaluation methods will be applied:

- (a) Inland transportation, ex-factory/ from port-of-entry, insurance and incidentals.
 - (i) Inland transportation, insurance and other incidentals, for delivery of goods to the project site as stated in ITB Clause 9.2 (iii).

The above costs will also be added to the bid price.

- (b) Delivery schedule:

The **Purchaser** desires to have delivery of the goods covered under the invitation, at the time specified in the schedule of requirements. The estimated time of the arrival of the goods at the project site should be calculated for each bid after allowing for reasonable transportation time. Treating the bid offering the scheduled time of arrival as the base, a delivery “adjustment” will be calculated for other bids at 2% of the ex-factory price for each month of delay beyond the base and this will be added to the bid price for evaluation. No credit will be given to earlier

deliveries and bids offering delivery beyond 2 months of stipulated delivery will be treated as unresponsive.

- (c) Deviation in Payment Schedule:
The special conditions of contract indicate the payment schedule offered by the *Purchaser*. If a bid deviates from the schedule and if such deviation is considered acceptable to the *Purchaser*, the bid will be evaluated by calculating interest earned for any earlier payments involved in the terms outlined in the bid as compared to those stipulated in this invitation at a rate of 12% per annum.

- (d) Spare parts and after sales service facilities in India:
The cost of the *Purchaser* of establishing the minimum service facilities and parts inventories, as outlined elsewhere in the bid invitation, if quoted separately, shall be added to the bid price.

- (e) Annual Maintenance Contract (AMC):
 - i. The purchaser desires to have a comprehensive maintenance contract for a period of seven years after the expiry of free maintenance period of 3 years. Bidders should clearly indicate year wise comprehensive maintenance charges in the price schedule which shall be added to the bid price at a discount rate of 8% per annum. **Bids without this charges will be considered as non-responsive.**

 - ii. Any major repair pointed out by the *Purchaser* shall be rectified by the Supplier from the date of intimation within a period of 3 calendar days and commission the equipment to the satisfaction of the Purchaser.

24. Contacting the purchaser

24.1 Subject to ITB Clause 21, no bidder shall contact the *Purchaser* on any matter relating to its bid, from the time of bid opening to the time the contract is awarded.

24.2 Any effort by a bidder to influence the *Purchaser* in the *Purchaser's* bid evaluation, bid comparison or contract award decisions may result in rejection of the bidder's bid.

24.3 The bidders shall not make attempts to establish unsolicited and unauthorized contact with the Tender accepting authority, Tender Inviting Authority or Tender Scrutiny Committee after opening of the bids and prior to the notification of award and any attempt by any bidder to bring to bear extraneous pressures on the Tender Accepting Authority bidder shall be sufficient reason to disqualify the bidder.

24.4 Notwithstanding anything contained in clause 24.3 above pursuant to ITB clause 21, the Tender Inviting Authority or the Tender Accepting Authority, may seek bona fide clarifications from bidders relating to the bids submitted by them during the evaluation of bids.

F. AWARD OF CONTRACT

25. Post Qualification

25.1 In the absence of pre-qualification, the *Purchaser* will determine to its satisfaction whether the bidder that is selected as having submitted the lowest evaluated responsive bid meets the criteria specified in ITB Clause 11.2 (b) and is qualified to perform the contract satisfactorily.

25.2 The determination will take into account the bidders financial, technical and production capabilities. It will be based upon an examination of the documentary evidence of the bidders qualifications submitted by the bidder, pursuant to ITB Clause 11 as well as such other information as the *Purchaser* deems necessary and appropriate.

25.3 An affirmative determination will be a prerequisite for award of the contract to the bidder. A negative determination will result in rejection of the bidders bid, in which event the *Purchaser* will proceed to the next lowest evaluated bid to make a similar determination of that bidders capabilities to perform satisfactorily.

26. Award Criteria

26.1 Subject to ITB Clause 28, the *Purchaser* will award the contract 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.

27. Purchaser's right to vary quantities at time of award

27.1 The *Purchaser* reserves the right at the time of award of contract to increase or decrease the quantity of goods and services originally specified in the schedule of requirements without any change in unit price or other terms and conditions.

28. Purchaser's right to accept any bid and to reject any or all bids

28.1 The *Purchaser* reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids at any time prior to award of contract, without thereby incurring any liability to the affected bidder or bidders or any obligation to inform the affected bidder or bidders of the grounds for the purchasers action.

29. Notification of Award

29.1 Prior to the expiration of the period of bid validity, the *Purchaser* will notify the successful bidder in writing by registered letter or by cable or telex, to be confirmed, that its bid had been accepted.

29.2 The notification of award will constitute the formation of the contract.

29.3 Upon the successful bidders furnishing of performance security pursuant to ITB Clause 31, the **Purchaser** will promptly notify each unsuccessful bidder and will discharge its bid security, pursuant to ITB Clause 13.

30. Signing of Contract

30.1 At the same time as the **Purchaser** notifies the successful bidder that its bid has been accepted, the **Purchaser** will send the bidder the contract form provided in the bidding documents, incorporating all agreements between the parties.

30.2 Within 10 days of receipt of notification of award, the successful bidder shall sign the contract agreement, for the supply and installation and also for the comprehensive AMC contract as applicable after the warranty period.

31. Performance Security

31.1 Within 7 days of the receipt of notification of award from the **Purchaser**, the successful bidder shall furnish the performance security in accordance with the conditions of contract, in the performance security form provided in the bidding documents or in another form acceptable to the **Purchaser**.

31.2 Failure of the successful bidder to comply with the requirement of ITB Clause 30 or ITB Clause 31 shall constitute sufficient grounds for the annulment of the award and forfeiture of the bid security, in which event the **Purchaser** may make the award to the next lowest evaluated bidder or call for new bids.

32. Fraud and corruption

It is **purchaser's** policy to require that the bidders, suppliers and contractors and their subcontractor observe the highest standard of ethics during the procurement and execution of such contracts.¹ In pursuance of this policy, the **purchasers**;

- (a) defines, for the purposes of this provision, the terms set forth below as follows:
 - (i) **“corrupt practice”**² is the offering, giving, receiving or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party;
 - (ii) **“fraudulent practice”**³ is any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to

¹ *In this context, any action taken by a bidder, supplier, contractor, or a sub-contractor to influence the procurement process or contract execution for undue advantage is improper.*

² *“another party” refers to a public official acting in relation to the procurement process or contract execution]. In this context, “public official” includes staff and employees of other organizations taking or reviewing procurement decisions.*

³ *a “party” refers to a public official; the terms “benefit” and “obligation” relate to the procurement process or contract execution; and the “act or omission” is intended to influence the procurement process or contract execution.*

mislead, a party to obtain a financial or other benefit or to avoid an obligation;

(ii) **“collusive practice”**⁴ is an arrangement between two or more parties designed to achieve an improper purpose, including to influence improperly the actions of another party;

(iv) **“coercive practice”**⁵ is impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party;

(v) **“obstructive practice”** is

(aa) deliberately destroying, falsifying, altering or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede a investigation into allegations of a corrupt, fraudulent, coercive or collusive practice; and/or threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation; or

(bb) acts intended to materially impede the exercise of the purchaser’s inspection and audit rights provided for under sub-clause 32 (e) below.

(b) will reject a proposal for award if it determines that the bidder considered for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive or obstructive practices in competing for the contract in question;

(c) will cancel the contract if the purchaser determines at any time that the bidder, supplier and contractors and their sub contractors engaged in corrupt, fraudulent, collusive, or coercive practices.

(d) will sanction a firm or individual, including declaring ineligible, either indefinitely or for a stated period of time, to be awarded a contract if it at any time determines that the firm has, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive or obstructive practices in competing for, or in executing, a contract; and

(e) will have the right to inspect the accounts and records of the bidders, supplier, and contractors and their subcontractors and to have them audited by auditors appointed by the purchaser.

Furthermore, Bidders shall be aware of the provision stated in Sub Clause 32 of the General Conditions of Contract.

33. Appeal

⁴ *“parties” refers to participants in the procurement process (including public officials) attempting to establish bid prices at artificial, non competitive levels.*

⁵ *a “party” refers to a participant in the procurement process or contract execution.*

- 33.1 This tender is governed by the provisions of Tamilnadu Transparency in Tenders Act 1998 and the Rules there under.
- 32.2 Any tenderer aggrieved by the order passed by the Tender Accepting Authority under section 10 of the said Act, may appeal to the Government within ten days from the date of receipt of order and the Government shall dispose the appeal within fifteen days from the date of receipt.
- 33.3 No Appeal shall be preferred while the tender is in process until tender is finalized and Notification of award as stated ITB in clause 29 is completed by the purchaser.

SECTION III : GENERAL CONDITIONS OF CONTRACT

**SECTION III: GENERAL CONDITIONS OF CONTRACT
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GENERAL CONDITIONS OF CONTRACT

1. Definitions

1.1 In this contract the following terms shall be interpreted as indicated:

- (a) “The Contract” means the agreement entered into between the *Purchaser* and the Supplier as recorded in the Contract Form signed by the parties, including all the attachments and appendices thereto and all documents incorporated by reference therein;
- (b) “The Contract Price” means the price payable to the Supplier under the Contract for the full and proper performance of its contractual obligations;
- (c) “The Goods” means all the equipment, machinery, and/or other materials which the Supplier is required to supply to the *Purchaser* under the Contract;
- (d) “Services” means services ancillary to the supply of the Goods, such as transportation and insurance, and other incidental services, such as installation, commissioning, provision of technical assistance, training and other obligations of the Supplier covered under the contract;
- (e) “GCC” means the General Conditions of Contract contained in this section.
- (f) “SCC” means the Special Conditions of Contract.
- (g) “The *Purchaser*” means the Organisation purchasing the Goods, as named in SCC;
- (h) “The Supplier” means the individual or firm supplying the Goods under this Contract;
- (i) “The Project Site”, where applicable means the place or places named in SCC.
- (j) “Day” means calendar day.
- (k) “Delivery period” means the period applicable upto completion of supply, installation, testing and commissioning of the equipment by the supplier at the Project site and accepted by the Purchaser.

2. Application

2.1 These General Conditions shall apply to the extent that they are not superseded by provisions in other parts of the Contract.

3. Standards

3.1 The Goods supplied under this Contract shall conform to the standards mentioned in the Technical Specifications, and, when no applicable standard is mentioned, to the authoritative standard appropriate to the Goods country or origin and such standards shall be the latest issued by the concerned institution.

4. Use of Contract Documents and Information

4.1 The Supplier shall not, without the *Purchaser's* prior written consent, disclose the Contract, or any provision thereof, or any specification, plan, drawing, pattern, sample or information furnished by or on behalf of the *Purchaser* in connection therewith, to any person other than a person employed by the Supplier in performance of the Contract. Disclosure to any such employed person shall be made in confidence and shall extend only so far as may be necessary for purposes of such performance.

4.2 The Supplier shall not, without the *Purchaser's* prior written consent, make use of any document or information enumerated in GCC Clause 4.1 except for purposes of performing the Contract.

4.3 Any document, other than the Contract itself, enumerated in GCC clause 4.1 shall remain the property of the *Purchaser* and shall be returned (in all copies) to the *Purchaser* on completion of the supplier's performance under the Contract if so required by the *Purchaser*.

5. Patent Rights

5.1 The Supplier shall indemnify the *Purchaser* against all third-party claims of infringement of patent, trademark or industrial design rights arising from use of the Goods or any part thereof in India.

6. Performance Security

6.1 Within 7 days after the Supplier's receipt of notification of award of the Contract, the Supplier shall furnish performance security to the *Purchaser* in the amount specified in the Special Conditions of Contract.

6.2 The proceeds of the performance security shall be payable to the *Purchaser* as compensation for any loss resulting from the Supplier's failure to complete its obligations under the Contract.

6.3 The Performance Security shall be denominated in India Rupees and shall be in one of the following forms:

(a) A Bank guarantee issued by a nationalized/ scheduled bank located in India and in the form provided in the bidding Documents or any other form acceptable to the *Purchaser*; or

(b) A cashier's cheque, certified cheque, or demand draft.

6.4 The performance security will be discharged by the **Purchaser** and returned to the Supplier not later than 30 days following the date of completion of the Supplier's performance obligations, including any warranty obligations, unless specified otherwise in SCC

7. **Inspection and Tests**

7.1 The **Purchaser** or its representative shall have the right to inspect and/or to test the Goods to confirm their conformity to the Contract at no extra cost of the **Purchaser**. The Special conditions of Contract and/or the Technical Specifications shall specify what inspections and tests the **Purchaser** requires and where they are to be conducted. The **Purchaser** shall notify the Supplier in writing of the identity of any representatives retained for these purposes.

7.2 The inspections and test may be conducted on the premises of the Supplier or its subcontractor(s), at point of delivery and/or at the Goods final destination. Where conducted on the premises of the Supplier or its subcontractor(s), all reasonable facilities and assistance including access to drawings and production data – shall be furnished to the inspectors at no charge to the **Purchaser**.

7.3 Should any inspected or tested Goods fail to conform to the specifications, the **Purchaser** may reject them and the Supplier shall either replace the rejected Goods or make all alternations necessary to meet specification requirements free of cost to the **Purchaser**.

7.4 The Purchasers right to inspect, test and, where necessary, reject the Goods' arrival in at site shall in no way be limited or waived by reason of the Goods having previously been inspected, tested and passed by the **Purchaser** or its representative prior to the Goods despatched.

7.5 Nothing in GCC Clause 7 shall in any way release the Supplier from any warranty or other obligations under this Contract.

7.6 Inspection and Audit

- (i) The supplier shall permit the **purchaser** and or persons appointed by the **purchaser** to inspect the supplier's office and / or the accounts and records of the suppliers and its sub contractors relating to the performance of the contract, and to have such accounts and records audited by auditors appointed by the purchaser if required.

The Supplier's attention is drawn to Clause 32, which provides, inter alia, that acts intended to materially impede the exercise of the purchaser inspection and audit rights provided for under Sub-Clause 7.6 (i) constitute a prohibited practice subject to contract termination

8. **Packing**

8.1 The Supplier shall provide such packing of the Goods as is required to prevent their damage or deterioration during transit to their final destination as indicated in the Contract. The packing shall be sufficient to withstand, without limitation, rough handling during transit and exposure to extreme temperatures, salt and precipitation during transit and open storage. Packing case size and weights shall take into consideration, Where appropriate, the remoteness of the Goods final destination and the absence of heavy handling facilities at all points in transit.

8.2 The packing, marking and documentation within and outside the packages shall comply strictly with such special requirements as shall be provided for in the Contract including additional requirements, if any, specified in SCC and in any subsequent instructions ordered by the *Purchaser*.

9. Delivery and Documents

9.1 Delivery of the Goods shall be made by the Supplier in accordance with the terms specified by the *Purchaser* in the Notification of Award. The details of despatching and/or other documents to be furnished by the supplier are specified in SCC.

10. Insurance

10.1 The Goods Supplied under the Contract shall be fully insured in Indian Rupees against the loss or damage incidental to manufacture or acquisition, transportation, storage and delivery in the manner specified in the Special Conditions of Contract.

11. Transportation

11.1 Where the Supplier is required under the Contract to transport the Goods to a specified place of destination within the India defined as Project site, transport to such place of destination in India insurance, as shall be specified in the Contract, shall be arranged by the Supplier, and the related cost shall be included in the Contract Price.

12. Incidental Services

12.1 The supplier may be required to provide any or all of the following services, including additional services, if any, specified in SCC:

1. Performance or supervision of the on-site assembly and/or start-up of the supplied Goods;
2. furnishing of tools required for assembly and/or maintenance of the supplied Goods;
3. furnishing of detailed operations and maintenance manual for each appropriate unit of supplied Goods.

4. performance or supervision or maintenance and/or repair of the supplied Goods, for a period of time agreed by the parties, provided that this service shall not relieve the Supplier of any warranty obligations under this Contract; and
- (e) training of the *Purchaser*'s Personnel, at the Supplier's plant and/or on-site, in assembly, start-up, operation, maintenance and/or repair of the supplied Goods.

12.2 Prices charged by the Supplier for incidental services, if not included in the contract Price of the Goods, shall be agreed upon in advance by the parties and shall not exceed the prevailing rates charged to other parties by the Supplier for similar services.

13. Spare Parts

13.1 As specified in the Special Conditions of Contract, the Supplier may be required to provide any or all of the following materials and notifications and information pertaining to spare parts manufactured or distributed by the Supplier:

- (a) Such spare parts as the *Purchaser* may elect to purchase from the Supplier, providing that this election shall not relieve the Supplier of any warranty obligations under the Contract; and
- (b) In the event of termination of production of the spare parts:
 - (i) advance notification to the *Purchaser* of the pending termination, in sufficient time to permit the *Purchaser* to procure needed requirements; and
 - (ii) following such termination, furnishing at no cost to the *Purchaser*, the blueprints, drawings and specifications of the spare parts, if and when requested.

14. Warranty

14.1 The Supplier warrants that the Goods supplied under this Contract are new, unused, of the most recent or current models and incorporate all recent improvements in design and materials unless provided otherwise in the Contract. The supplier further warrants that the Goods supplied under this Contract shall have no defect arising from design, materials or workmanship (except when the design and/or material is required by the *Purchaser*'s specifications) or from any act or omission of the Supplier, that may develop under normal use of the supplied Goods in conditions obtaining in the country of final destination.

14.2 This warranty shall remain valid for One year after the Goods or any portion thereof as the case may be, have been delivered to and accepted at the final destination indicated in the Contract.

14.3 The *Purchaser* shall promptly notify the supplier in writing of any claims arising under this warranty.

14.4 Upon receipt of such notice , the Supplier shall, within the period specified in SCC and with all reasonable speed, repair or replace the defective Goods or parts thereof, without cost to the **Purchaser**.

14.5 If the Supplier, having been notified, fails to remedy the defect(s) within the period specified in SCC within a reasonable period, the **Purchaser** may proceed to take such remedial action as may be necessary, at the Supplier's risk and expense and without prejudice to any other rights which the **Purchaser** may have against the Supplier under the contract.

15. Payment

15.1 The method and conditions of payment to be made to the Supplier under the Contract shall be specified in the Special Conditions of Contract.

15.2 The Suppliers request(s) for payment shall be made to the **Purchaser** in writing, accompanied by an invoice describing, as appropriate, the Goods delivered and the services performed, and by documents, submitted pursuant to GCC Clause 9, and upon fulfillment of other obligations stipulated in the contract.

15.3 Payment shall be made promptly by the **Purchaser** but in no case later than sixty (60) days after submission of the invoice/claim by the Supplier.

15.4 Payment shall be made in Indian Rupees

16. Prices

16.1 Prices charged by the Supplier for Goods delivered and Services performed under the Contract shall not vary from the prices quoted by the Supplier in its bid, with the exception of any prices adjustments authorized in the special Conditions of Contract or in the *Purchaser's* request for bid validity extensions, as the case may be.

17. Change Orders

17.1 The *Purchaser* may at any time by written order given to the Supplier pursuant to GCC Clause 30, make changes within the general scope of the Contract in any one or more of the following:

- (a) drawings, designs or specifications, where Goods to be furnished under the Contract are to be specifically manufactured for the *Purchaser*;
- (b) the method of shipping or packing
- (c) the place of delivery; or
- (d) the services to be provided by the Supplier.

17.2 If any such changes causes an increase or decrease in the cost of, or the time required for, the Supplier's performance of any provisions under the Contract, an equitable adjustment shall be made in the Contract Price or delivery schedule, or both, and the Contract shall accordingly be amended. Any claims by the Supplier for adjustment under this clause must be asserted within thirty (30) days from the date of the Supplier's receipt of the *Purchaser's* change order.

18. Contract Amendments

18.1 Subject to GCC Clause 17, no variation in or modification of the terms of the Contract shall be made except by written amendment signed by the parties.

19. Assignment

19.1 The Supplier shall not assign, in whole or in part, its obligations to perform under the contract, except with the *Purchaser's* prior written consent.

20. Subcontracts

20.1 The supplier shall notify the *Purchaser* in writing of all subcontracts awarded under the contract if not already specified in his bid. Such notification, in his original bid or later, shall not relieve the Supplier from any liability or obligation under the contract.

21. Delays in the Supplier's Performance

- 21.1 Delivery of the Goods and performance of the Services shall be made by the Supplier in accordance with the time schedule specified by the *Purchaser* in its Schedule of Requirements.
- 21.2 If at any time during the performance of the Contract, the Supplier or its subcontractor(s) should encounter conditions impeding timely delivery of the goods and performance of the Services, the Supplier shall promptly notify the *Purchaser* in writing of the fact of the delay, its likely duration and its cause(s). As soon as practicable after receipt of the Supplier's notice, the *Purchaser* shall evaluate the situation and may at its discretion extend the Supplier's time for performance with or without liquidated damages, in which case the extension shall be ratified by the parties by amendment of the Contract.
- 21.3 Except as provided under GCC Clause 24, a delay by the Supplier in the performance of its delivery obligation shall render the supplier liable to the imposition of liquidated damages pursuant to GCC Clause 22, unless any extension of time is agreed upon pursuant to GCC clause 21.2 without the application of liquidated damages.

22. Liquidated Damages

- 22.1 Subject to GCC Clause 24, if the Supplier fails to deliver any or all of the Goods or to perform the Services within the period(s) specified in the Contract, the *Purchaser* shall, without prejudice to its other remedies under the Contract, deduct from the Contract Price, as liquidated damages, a sum equivalent to the percentage specified in SCC of the delivered price of the delayed Goods or unperformed Services for each week or part thereof of delay until actual delivery or performance, up to a maximum deduction of the percentage specified in the SCC. Once the maximum is reached, the *Purchaser* may consider termination of the Contract pursuant to GCC Clause 23.

23. Termination for Default

- (a) The *Purchaser* may, without prejudice to any other remedy for breach of contract, by written notice of default sent to the supplier, terminate the Contract in whole or part;
- (i) if the Supplier fails to deliver any or all of the goods within the time period(s) specified in the Contract, or within any extension thereof granted by the *Purchaser* pursuant to clause 21; or
 - (ii) if the Supplier fails to perform any other obligation(s) under the Contract; or
 - (iii) if the supplier, in the judgment of the *Purchaser*, has engaged in fraud and corruption, as defined in GCC clause 32, in competing for or in executing the contract.

- (b) In the event the *Purchaser* terminates the Contract in whole or in part, pursuant to GCC Clause 23.1(a), the *Purchaser* may procure, upon such terms and in such manner as it deems appropriate, Goods or Services similar to those undelivered, and the Supplier shall be liable to the *Purchaser* for any additional costs for such similar Goods. However, the Supplier shall continue the performance of the Contract to the extent not terminated.

24. Termination for Insolvency

- (a) The *Purchaser* may at any time terminate the Contract by giving written notice to the Supplier, if the Supplier becomes bankrupt or otherwise insolvent. In this event, termination will be without compensation to the Supplier, provided that such termination will not prejudice or affect any right of action or remedy that has accrued or will accrue thereafter to the *Purchaser*.

25. Termination for Convenience

- (a) The *Purchaser*, may by written notice sent to the Supplier, may terminate the Contract, in whole or in part, at any time for its convenience. The notice of termination shall specify that termination is for the *Purchaser*'s convenience, the extent to which performance of work under the Contract is terminated, and the date upon which such termination becomes effective.
- (b) The Goods that are complete and ready for shipment within 30days after the Supplier's receipt of notice of termination shall be accepted by the *Purchaser* at the Contract terms and prices. For the remaining Goods, the *Purchaser* may elect.
1. to have any portion completed and delivered at the Contract terms and prices; and /or
- (ii) to cancel the remainder and pay to the Supplier an agreed amount for partially completed Goods and for materials and parts previously procured by the Supplier.

26. Force Majeure

- 26.1 Notwithstanding the provisions of GCC Clauses 21,22,23, the Supplier shall not be liable for forfeiture of its performance security, liquidation damages or termination for default, if and to the extent that, its delay in performance or other failure to perform its obligations under the Contract is the result of an event of Force Majeure.
- 26.2 For purposes of this Clause “Force Majeure” means an event beyond the control of the Supplier and not involving the Supplier’s fault or negligence and not foreseeable. Such events may include, but are not limited to, acts of the *Purchaser* either in its sovereign or contractual capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions and freight embargoes.
- 26.3 If a Force Majeure situation arises, the Supplier shall promptly notify the *Purchaser* in writing of such conditions and the cause thereof. Unless otherwise directed by the *Purchaser* in writing, the Supplier shall continue to perform its obligations under the Contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the force majeure event.

27. Resolution of Disputes

27.1 The *Purchaser* and the supplier shall make every effort to resolve amicably by direct informal negotiation any disagreement or dispute arising between them under or in connection with the Contract.

27.2 If, after thirty (30) days from the commencement of such informal negotiations, the *Purchaser* and the Supplier have been unable to resolve amicably a Contract dispute, either party may require that the dispute be referred for resolution to the formal mechanisms specified in the Special Conditions of Contract. These mechanisms may include, but or not limited to, conciliation mediated by a third Party, adjudication in an agreed national forum, and national arbitration.

28. Governing Language

28.1 The contract shall be written in English language. Subject to Clause 29, English language version of the Contract shall govern its interpretation. All correspondence and documents pertaining to the Contract which are exchanged by the parties shall be written in the same language.

29. Applicable Law

29.1 The Contract shall be interpreted in accordance with the laws of the Union of India.

30. Notices

30.1 Any notice given by one party to the other pursuant to this Contract shall be sent to other party in writing or by cable, telex or fascimile and confirmed in writing to the other Party's address specified in Special Conditions of Contract.

30.2 A notice shall be effective when delivered or on the notice's effective date, whichever is later.

31. Taxes and Duties

31.1 Suppliers shall be entirely responsible for all taxes, duties, license fees, octroi, road permits, etc., incurred until delivery of the contracted Goods to the *Purchaser*. However, Sales tax in respect of the transaction between the *Purchaser* and the Supplier shall be payable extra, if so stipulated in the Notification of Award.

32. Fraud and corruption

32.1 If the Purchaser determines that the Supplier has engaged in corrupt, fraudulent, collusive, coercive or obstructive practices, in competing for or in executing the Contract, then the Purchaser may, after giving 7 days notice to the Supplier, terminate the Supplier's employment under the Contract and cancel the contract, and the provisions of Clause 23 shall apply as if such termination had been made under clause 23.

(a) For the purposes of this Sub-Clause:

- (i) "corrupt practice" is the offering, giving, receiving or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party;
- (ii) "fraudulent practice" is any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation;
- (iii) "collusive practice" is an arrangement between two or more parties designed to achieve an improper purpose, including to influence improperly the actions of another party;
- (iv) "coercive practice" is impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party;
- (v) "obstructive practice" is

- (aa) deliberately destroying, falsifying, altering or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede a purchaser investigation into allegations of a corrupt, fraudulent, coercive or collusive practice; and/or threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation; or
- (bb) acts intended to materially impede the exercise of the purchaser's inspection and audit rights provided for under Clause 11 [Inspections and Audits by the Bank].

32.2 Notwithstanding the clause 32 above, Should any employee of the Supplier be determined to have engaged in corrupt, fraudulent, collusive, coercive, or obstructive practice during the purchase of the Goods, then that employee shall be removed.

SECTION IV: SPECIAL CONDITIONS OF CONTRACT

**SECTION IV: SPECIAL CONDITIONS OF CONTRACT
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SPECIAL CONDITIONS OF CONTRACT

The following Special Conditions of Contract shall supplement the General Conditions of Contract. Whenever there is a conflict, the provisions herein shall prevail over those in the General Conditions of contract. The Corresponding clause number of the General Conditions is indicated in parentheses.

1. Definitions(GCC Clause 1)

(a) The **Purchaser** is **Tamilnadu Medical Services Corp. Ltd., Chennai.**

(b) The Supplier is.....

(c) Project site is the place(s) mentioned in the Schedule of Requirements

2. Performance Security (GCC Clause 6)

2.1 Substitute Clause 6.1 of GCC by the following:

Within 7 days after the supplier's receipt of Notification of Award, the supplier shall furnish performance security to the **Purchaser** for an amount of 5% of the contract value valid upto 60 days after the date of completion of performance obligations including the warranty obligations.

The performance security will be released after entering into a comprehensive maintenance contract after the warranty period and on payment of required performance security for the CMC contract. However in no case, the performance security will be returned before the date of completion of the warranty obligation.

Performance security for Maintenance contract

After successful completion of warranty period of 3 years, the supplier shall furnish performance security for 5% of the comprehensive AMC applicable for 7 years maintenance period valid for 7 years period of maintenance.

2.2 Substitute Clause 6.3 (b) of GCC by the following:

A cashier's cheque or banker's certified cheque or crossed demand draft or pay order drawn in favour of the **Purchaser**.

2.3 Substitute Clause 6.4 of the GCC by the following:

The Performance Security will be discharged by the **Purchaser** and returned to the Supplier not later than 60 days following the date of completion of the Supplier's performance obligations, including the warranty obligations, under the Contract.

2.4 Add Clause 6.5 to the GCC of the following:

In the event of any contract amendment, the supplier shall, within 7 days of receipt of such amendment, furnish the amendment to the Performance Security, rendering the same valid for the duration of the Contract, as amended for further period of 60 days thereafter.

3. Inspection and Tests (GCC Clause 7)

The following inspection procedures and tests are required by the *Purchaser*;

The supplier shall get each equipment inspected in manufacturer's works and submit a test certificate and also guarantee/warranty certificate that the equipment conforms to laid down specifications.

The *Purchaser* or its representative shall inspect and/or test any or all the equipment to confirm their conformity to the Contract specifications, prior to despatch from the manufacturer's premises. Such inspection and clearance will not prejudice the right of the consignee to inspect and test the equipment on receipt at destination.

If the equipment fails to meet the laid down specifications the supplier shall take immediate steps to remedy the deficiency or replace the defective equipment to the satisfaction of the *Purchaser*.

4. Packing (GCC Clause 8)

Add as Clause 8.3 of the GCC the following:

Packing Instruction: The Supplier will be required to mark separate packages for each consignee. Each package will be marked on three sides with proper paint/indelible ink, the following:

- i) Project
- ii) Contract No.
- iii) Supplier's Name
- iv) Packing list reference number

5. Delivery and Documents (GCC Clause 9)

Upon delivery of the Goods, the Supplier shall notify the *Purchaser* and the Insurance Company by cable or Telex or fax the full details of shipment including the Contract number, railway receipt number and date, description of Goods, quantity, names of the consignee etc.

The Supplier shall mail the following documents to the *Purchaser*, with a copy to the Insurance Company.

- (i) Three Copies of Supplier invoice (in duplicate) showing Goods description, quantity, unit price, total amount;
- (ii) Railway receipt/acknowledgment of receipt of goods from the Consignee(s)
- (iii) Insurance Certificate;
- (iv) Manufacturer's/ Supplier's warranty and test Certificate;
- (v) Inspection Certificate issued by the nominated inspection agency, and the Supplier's factory inspection report;

The above documents shall be received by the **Purchaser** before arrival of Goods (except where the Goods have been delivered directly to the Consignee with all documents) and, if not received, the supplier will be responsible for any consequent expenses.

6. Insurance (GCC Clause 10)

For delivery of goods at site, the insurance shall be obtained by the Supplier in an amount equal to 110% of the value of the goods from "Warehouse to Warehouse" (Final destinations) on "All Risks" basis including War Risks and Strike.

7. Incidental Service (GCC Clause 12)

The following services covered under Clause 12 shall be furnished and the cost shall be included in the contract price:

- (a) Unloading, safe storage and handling of consignment of site.
- (b) On site assembly if any of the supplied goods, installation, testing and commissioning of the equipment.
- (c) Furnishing of detailed operations and maintenance manual for each appropriate unit of supplied Goods;

8. Spare parts (GCC Clause 13)

Add as Clause 13.2 to the GCC the following:

Supplier shall carry sufficient inventories to assure ex-stock supply of consumable spares for the Goods. Other main spare parts and components shall be supplied as promptly as possible but in any case within one week of placement of order.

9. Warranty (GCC Clause 14)

9.1 Substitute GCC Clause 14.2 by the following:-

This warranty shall remain valid for 3 years after goods or any portion thereof as the case may be, have been delivered to and accepted at the final destination indicated in the contract.

9.2 The Supplier shall, in addition, comply with the performance and/ or consumption guarantees specified under the contract. If for reasons attributable to the Supplier, these guarantees are not attained in whole or in part, the Supplier shall at its discretion either:

(a) make such changes, modifications, and/or additions to the Goods or any part thereof as may be necessary in order to attain the contractual guarantees specified in the Contract at its own cost and expense and to carry out further performance tests in accordance with SCC 3:

10. Payment (GCC Clause 15)

Payment for Goods and Services shall be made in Indian Rupees as follows:

(i) No advance payment is payable.

(ii) 100% payment will be made against supply and installation of the equipments at the respective sites against certification along with necessary stock entry bills from the respective consignee.

- a) If there is a delay in installation of the equipment due to reasons not attributable to the supplier such as non readiness of site, 50% of the supply value will be released against supply and provisional stock entry certificate from the consignee / end user.
- b) If there is no situation such as non availability of site etc., and installation is taken up by the supplier immediately after supply, 50% of the supply value will be paid against supply and certificate for receipt of the item in good condition and a provisional stock entry certificate, from the consignee / end user.
- c) On completion of installation, another 20% is payable against installation certificate issued by the end user.
- d) The final 30% will be paid after receipt of proper stock entry certificate from the end user.
- e) For items ordered in bulk quantities, the first payment will be released only after supply / installation of atleast 20% of the ordered quantity or Rs.25.00 lakhs whichever is less.
- f) If the price includes customs duty, relevant documentary evidence for import of the equipment / goods (Bill of lading / Airway Bill, Bill of entry and invoice copy) and proof for payment of Custom duty shall be furnished.
- g) Payment will be made either by means of Cheque or through RTGS (Real Time Gross Settlement System) / Core Banking / NEFT (Net Electronic Fund Transfer).

11. Prices (GCC Clause 16)

Substitute Clause 16.1 of the GCC with the following:

Prices payable to the Supplier as stated in the Contract shall not be subject to adjustment during performance of the Contract.

12. Sub-Contract (Clause 20)

Add at the end of sub-clause 20.1 the following:

Sub-contract shall be only for bought-out items and sub-assemblies.

13. Liquidated Damages (GCC Clause 22)

13.1 For delays:

Substitute GCC Clause 22.1 by the following

Subject to Clause 24, if the Supplier fails to deliver any or all of the Goods or perform of services within the time period(s) specified in the Contract, the **Purchaser** shall without prejudice to its other remedies under the Contract, deduct from the Contract Price, as liquidated damages, a sum equivalent to 0.5 percent of the delivered price of the delayed Goods or unperformed Services for each week of delay or part thereof until actual delivery or performance, up to a maximum deduction of 10 percent of the delayed Goods or Services contract price. Once the maximum is reached, the **Purchaser** may consider termination of the Contract.

14. Resolution of Disputes (GCC Clause 27)

Add as GCC Clauses 27.3 and 27.4 the following:

27.3 The dispute resolution mechanism to be applied pursuant to GCC Clause 27 shall be as follows:

- (a) In the case of a dispute or difference arising between the **Purchaser** and a Supplier relating to any matter arising out of or connected with this agreement, such dispute or difference shall be settled in accordance with the Arbitration and Conciliation Act 1996 the Arbitral Tribunal shall consist of 3 Arbitrator, one each to be nominated by the **Purchaser** and the supplier. The third Arbitrator shall be chosen by the two Arbitrators so appointed by the parties and shall act as Presiding Arbitrator. In case of failure of the two Arbitrator appointed by the parties to reach upon a consensus with in a period of 30 days from the appointment of the Arbitrator appointed subsequently, the Presiding Arbitrator shall be appointed by the President of Institute of Engineers (India).

27.4 The venue of arbitration shall be the place from where the Contract is issued (ie.) Chennai.

15. Notices (clause 30)

For the purpose of all notices, the following shall be the address of the *Purchaser* and Supplier.

***Purchaser:* Tamilnadu Medical Services Corp. Ltd.,
417, Pantheon Road,
Egmore,
Chennai 600 008.**

Supplier:

(To be filled in at the time of Contract signature)

16. Annual Maintenance Contract (AMC):

16.1 The supplier shall under take atleast one preventive maintenance visit per quarter and attend to all break down calls. The payment for the maintenance services will be made at the end of each quarter based on the certificate from the end user for completion of preventive maintenance and break down maintenance as per schedule.

16.2 An uptime guarantee of 95% shall be maintained out of total usage period of the equipment by the end users during warranty and maintenance period.

16.3 Any major repair pointed out by the *Purchaser* shall be rectified by the Supplier from the date of intimation within a period of 3 calendar days and commission the equipment to the satisfaction of the Purchaser. Failing which the Purchaser has a right to levy a penalty on the Supplier a sum of Rs.10,000/- per day or part thereof for each equipment until the equipments are repaired and commissioned to the satisfaction of the Purchaser.

16.4 The Supplier shall indicate clearly the free guarantee maintenance of the whole system supplied by the Supplier and the same should not be less than 3 years.

16.5 The Supplier shall also indicate separately post guarantee maintenance cost of the entire system for 7 years subsequent to free maintenance period and shall clearly indicate year wise maintenance cost with probable cost of spares required for each year, in addition to comprehensive maintenance charges.

16.6 The scope of comprehensive Annual Maintenance Contract shall include replacement of all parts without any exclusion. The supplier shall undertake atleast one Preventive Maintenance Service per quarter of the year and attend to all break down maintenance calls. The payment for the comprehensive maintenance will be made at the end of each quarter against certification from the end user for satisfactory completion of Preventive Maintenance within the quarter and attending the breakdown calls within the stipulated period of 3 days from the date of intimation.

17. Enclosures to Bid:

17.1 Technical bid (Cover A):

Technical Bid shall include the duly filled up Tender documents along with

- a) Bid Security.
- b) Duly attested copy of License if any, approved by the concerned Licensing Authority.
- c) For Importers Photocopy of License renewed upto date.
- d) Documentary evidence of constitution of firm such as Memorandum of Articles, Partnership Deed, etc., with details of Name, Address, Tel. No.,

Fax No., E-mail Address of firm and the Managing Director / Partner / Proprietor.

- e) Authorisation of senior responsible officer of the Company to transact business.
- f) Annual turnover statement last for three years certified by the Auditor.
- g) Copies of Balance Sheet and Profit & Loss Account for three years certified by the Auditors.
- h) Sales Tax clearance Certificate as on 31.03.2017.
- i) Notarised statement of the Installed manufacturing capacity of the Items quoted.
- j) Qualification Criteria – Section VI-A
- k) Performance Statement – Section X
- l) Manufacturer's Authorisation Form – Section XI
- m) Technical literature and other documents in support of the goods / services.
- n) Any deviations
- o) List of items quoted (without prices)**
- p) In case of critical equipment, the supplier shall give a certificate to the effect that the equipment does not have any capability to remotely observe or access. If called for by the purchaser a verification and certificate of this claim shall be given by a 3rd party.**

17.2 Price Bid (Cover B):

Price bid shall include

- a) Duly filled in Price Schedule – Section VII
- b) Bid Form

Please note that the Bidder run the risk of his bid being rejected if the Price Schedule contains any conditions.

SECTION V : SCHEDULE OF REQUIREMENTS

SECTION – V
SCHEDULE OF REQUIREMENTS

Sch. No.	Brief Description	Unit	Qty.	Bid security (Rs.)
1.	Construction, Testing, Commissioning and Validation of TB Containment Laboratory as per specification	No.	1	Rs.54,000/-

Delivery Schedule: - 60 days from the date of purchase order.

Place of Delivery:- The above equipment should be delivered at **Govt. Hospital of Thoracic Medicine, Tambaram Sanatorium, Chennai.**

SECTION VI : TECHNICAL SPECIFICATIONS

SECTION VI : TECHNICAL SPECIFICATIONS

TECHNICAL SPECIFICATIONS FOR CONSTRUCTION, TESTING, COMMISSIONING AND VALIDATION OF TB CONTAINMENT LABORATORY

SCOPE OF WORK:

The Scope of work involves ' Construction, Testing, Commissioning and Validation of TB Containment Laboratory & associated works in compliance with WHO and CDC, USA guidelines as minimum and its maintenance'.

- The scope of work shall include design, complete construction and establishment of TB Containment facility including minor civil works, electrical works, public health engineering works etc. complete in all respect.
- All the fixed equipment and systems like pass box, HVAC system and its components (including A/C plant, air handling, exhaust systems, filters, controls etc.), computers, laboratory workstations, uninterrupted power supply system, door interlocks, access control system, fire detection & alarm, system, surveillance systems CCTV with remotely placed monitor control, fire extinguishers and any other equipment/systems essentially required to meet the intent and purpose of setting up of TB Containment laboratory shall be provided and included in the scope of works.
- Items/equipment like scientific laboratory instruments, bio safety cabinets, autoclaves and other equipment such as freezers, refrigerator, incubators, centrifuges etc. will be available at/ procured by the site. Architectural layout of the lab will be provided see Annexure 1

The scope of works shall also include:

- a) Supply and laying of the required power supply cables from the existing electrical room (LT Panel room) up to the proposed TB Containment Lab for its power supply.
- b) Extension of existing LT panel by providing feeder panel with switchgears of required capacities to meet the power requirements of TB Containment Lab. Dedicated earthing for the TB Containment Lab shall be installed as required by the vendor.

- c) Power required for the TB Containment Laboratory shall be tapped from the existing feeder lines (through its expansion and laying of required power cabling) or panels. All necessary arrangements like extension of existing feeder/bus bars, laying of power cables etc. for tapping of required power shall be made by the contractor. Supply should be three phase and with proper earthing and required capacity of 440V for AHU Unit for TB Containment lab.
- d) Extension of existing water supply lines up to the TB Containment Lab to meet its water supply requirements. Supply and erection of water tank 750-1000litres in case of inadequate or absence of water supply for emergency shower and eye wash stations.

PRE-REQUISITES FOR THE SITE TO COMPLY

1. **Power required for the TB Containment Laboratory** shall be tapped from the existing feeder lines (through its expansion and laying of required power cabling) or panels. Supply should be three phase and with proper earthing and required capacity of 440V for AHU Unit for TB Containment lab. Adequate provision for power back up in the form connection to a green source for energy back up or Diesel Generator Set of about 120-150 KVA capacity (to be re-calculated based on requirement at time of procurement/assessment) is a must to keep lab functional all time.\
2. **Water supply to the TB Containment Laboratory** shall be provided through the existing Water distribution network in campus.
3. **Strength of existing building structure-** Space identified for TB lab should be strong enough to withstand local climate/ environmental hazard. The institute will require to take care of seepage issues in the building if extensive (minor issues can be taken care by vendor)

CRITICAL CONSIDERATIONS TO BE FOLLOWED IN DESIGN:

The proposed TB Containment Laboratory shall be constructed in accordance with CDC, WHO and RNTCP and other international guidelines as minimum (see later in document reference materials used). Some of the minimum essential critical considerations for construction of the proposed TB Containment Laboratory shall be as under:

1. Restricted and controlled access shall be provided for entry into the laboratory.

2. The HVAC systems shall be provided to maintain the desired inside conditions in terms of temperatures, humidity conditions, air filtration requirements. Unidirectional airflow to be achieved by appropriate negative differential pressures and a minimum of 6-12 Air changes per hour to be achieved. Air from the laboratories, shall be exhausted only after appropriate filtration (HEPA filters) as per guidelines/standards. Redundant exhaust systems shall be provided for Tb Containment lab room. Leak proof dampers with provision to prevent backflow of air shall be provided in supply and exhaust air systems of laboratory rooms for isolation of rooms/zones.
3. Interiors of the TB Containment Lab- The internal building finishes shall be monolithic, impervious, non-particle shredding, chemical resistant to phenol, hypochlorite, etc. cleaning and suitable to withstand chemical use during decontamination /fumigation. Modular false ceiling panels should be made for Clean Room application. **Flooring** inside the TB Containment lab shall be of self-levelling industrial epoxy and clean room compatible.
4. The door interlocks, exhaust blower of BSCs, shall be provided with online, uninterrupted power supply system with minimum 30 minutes power backup.
5. Safety measures for fire and electricity shall be provided
6. Emergency shower, Eyewash station facility will be provided to address emergency spill situations. Emergency Exit door with panic latch door from the TB Containment Laboratory shall be provided

GENERAL CONSTRUCTION

The drawings shall be submitted by the contractor for review and approval by the client/Consultant. However some of the critical elements of the building and features are highlighted here under:

(b) **Building Planning Concept:**

The proposed TB Containment laboratory building shall be constructed on primary and secondary containment barrier system concept.

(c) **The Primary Barriers:**

Bio-safety cabinets (Class-IIA2) with thimble or canopy ducting, pass box, etc. shall constitute the primary containment barrier and shall be placed suitably to contain the contamination.

(d) **The Secondary Barriers:**

The laboratory building, air management and control system shall provide the secondary barrier system. Sustained directional airflow from “lesser contaminated area” towards “potentially higher contaminated areas” shall be achieved through differential pressure in areas/zones.

(e) **Building Construction and Finishing:**

The internal building finishing shall provide impervious and monolithic construction and all materials used for internal construction and finishing shall be non-particle shredding type and chemical resistant.

Joints like wall to wall, wall to floor and ceiling to wall shall be provided with covings for easy cleaning. All joints and penetrations in the building shall be sealed with silicon sealant. The drainage and effluent piping system from the TB Containment Lab areas shall be of chemical resistant materials.

DETAILED SPECIFICATIONS

1. **Restricted and controlled access** shall be provided for entry into the laboratory.

Access control system for entry / exits should be provided. 20 numbers of card to be provided to each lab.

2. **HEATING VENTILATION & AIR-CONDITIONING (HVAC) SYSTEM:**

- i. The entire laboratory shall be air-conditioned. The HVAC systems shall be provided to maintain the desired inside conditions in terms of temperatures, humidity conditions, air filtration requirements, room/zone pressure requirements and air change rate.
- ii. Housing/Casing of AHU unit: Air Handling Units shall be of sectionalized constructions with an under frame of extruded heavy aluminium profiles. The under frame shall be mechanically strong and shall take double skinned insulated panels. The powder coated panels shall consist of 0.8 mm galvanized iron outer skin and 0.63 mm galvanized iron inner skin with 13 mm thick injected PUF insulation in between two panels. The AHUs shall be with true thermal break. There should not be any projections inside the AHUs and the covings has to flush with the side panels. Air tight access panel with suitable neoprene gaskets shall be provided in the fan section, coil and filter section. Similar gaskets should be used at all other joints of the AHU and its ducting. Units meant for indoor

locations shall be specially designed to meet the arduous and corrosive atmosphere.

- iii. Platform for AHU: In places where firm, even and concrete surface not available, the same will have to be constructed (masonry work) for the entire surface area which will be enclosed within AHU shed.
- iv. There would be independent supply and exhaust system with unidirectional inward airflow and 100% exhaust.

v. **Supply Unit:**

- a. Air Conditioning Plant: The Air-Conditioning plant (of suitable capacity based on requirements of the lab's AHU) shall be with Direct Extension (DX system). The condenser unit shall have multiple compressors such that at least one compressor shall be as standby. The AHU shall comprise of Cooling Coil Section with 8 row deep DX coil, necessary component, 18 gauge SS 304 drain pan with 13 mm thick closed cell self-sticking polyethylene insulation, having slope at one side, drain connection from other side. Inlet and outlet coil nipples shall be sealed against unit casing by means of neoprene gaskets. Alternately, the cold air from the existing Central Air-Conditioning plant may be taken.
- b. The laboratory rooms will be supplied with pre-conditioned (heating, cooling) fresh air by a mechanical ventilation system. Temperature inside the lab shall be maintained at $22^{\circ}\text{C}\pm 2$.
- c. The air will be cooled to 12°C - 13°C then reheated with an electric duct coil to maintain required space conditions. This is required to maintain proper humidity conditions in the lab and humidity level should be maintained at $60\pm 10\%$. To heat the air in the winter, an electrical heater unit (of adequate capacity) would be planned. This heater will be the same heater that will function as dehumidifier unit in summer.
- d. Design of Supply air system: One variable speed supply fan of Gebhardt/ Krugger/ Nicotra or equivalent reputed OEM (Original Equipment Manufacturer) should be installed. Fan is designed for the whole required supply air amount (100% Redundancy). The fan shall be backward (or forward) curved centrifugal double inlet multi blade with optimized selection for low noise and high efficiency. Fans shall be statically and dynamically balanced for vibration free

operation. Fans shall be enclosed in galvanized steel scroll cases and shall be driven by a variable frequency drive (VFD). The VFD should be pre-set programme for five different varying fan speed with selector switch for user operation. Fan and motor assembly shall be mounted on vibration isolators eliminating the need for external vibration isolators. Provision shall be made for belt tensioning. Motor should be of required capacity of Crompton Greaves/ Siemens/ ABB or equivalent of reputed OEM make. The fan should not exceed noise level of 75 db (A) from 1 m distance. A spare motor shall be provided in case of any burn out/breakdown for immediate repair/replacement. 4-5 spare fan belts shall also be provided which can be used for replacement in case of wear/tear.

- e. Volume Control Dampers: The distribution of air is planned via air inlets in the laboratory rooms. To control the air volume flow variable volume boxes in the supply air ducts are planned (at mouth of supply, after blower and after fine filter). The housing for these dampers (in fact all) will be of extruded aluminium, Low Leakage Aerofoil design. A constant volume mechanical control damper valve will be installed which will also be easily accessible for corrective purposes. The supply air needs to be constant to maintain the proper air change rate.
- f. A wire mesh screen to prevent entry of rodents/birds/insects, etc. will be placed in front of the damper at the mouth of supply.

g. Filters:

- There will be three sets of filters- coarse filters at mouth of supply and fine filter after blower motor of supply unit and HEPA filter housing in the supply ducting at a distance of about 500mm from fine filter unit.
- Coarse filter will be in outside fresh air pre-filter section and will be G4 washable filter (50 mm deep) class having average arrestance of 85-98% for 10 microns size as per EN779 2002, after damper at mouth of supply (as mentioned in volume control damper).

- Fine filters will be F7 filter (300 mm deep) Average Efficiency 85-95% for 1 micron size as per EN 779 2002 standards and placed after coarse filter before air goes into DX system.
 - F-7 filter to be provided with test port elbows (pre and post) to put in magnehelic gauges tubing for measure differential pressure across it. These test port elbows will remain sealed/closed in routine condition.
 - The HEPA filter plenums (Containment Housing) shall be made in SS 304 (14 gauge) with air tight and leak proof construction. The HEPA filter plenums shall be provided Isolation dampers at Inlet and Outlet and shall have provisions and facility to carry out on site HEPA filter scanning, testing and validation, magnehelic pressure gauge to monitor pressure drop across the HEPA filter, fumigation ports to allow IN-SITU decontamination of HEPA filters and Bag-In-Bag-Out facility for change/replacement of filters. The quantity of HEPA filter should be provided on the basis of supply air room volume, length of duct.
- h) Ducting: Ventilation ducting shall be made out of minimum 24 gauge GI sheet, all the ventilation ducting shall be leak proof and with thermal insulation (the colour of insulation material will not be black). This insulation is made of nitrile rubber or glass wool. The GI duct should be fabricated as per SMACNA standards. To prevent air leakage, all the lateral joints and flanged joints of GI ducting should be sealed using silicone sealant.
- i) Ducting design will be submitted by the vendor along with details of bends, dimensions of the duct at various places from AHU to the TB Containment Lab, number of inlets/outlets planned, etc. which would be suitable from the lab being upgraded. It will have to be consulted with lab design expert and the lab i/c and approved before construction is carried out.
- j) Noise Reduction: To avoid the allowed noise level, sound absorber will be installed on the housing of the AHU.

vi. Exhaust System

- a) Design of Exhaust Air System: One variable speed exhaust fan of Gebhardt/ Krugger/ Nicotra or equivalent reputed OEM (Original Equipment Manufacturer)

should be installed. The fan shall be backward (or forward) curved centrifugal double inlet multi blade with optimized selection for low noise and high efficiency. Fans shall be statically and dynamically balanced for vibration free operation. Fans shall be enclosed in galvanized steel scroll cases and shall be driven by a variable frequency drive (VFD). The VFD should be pre-set programme for five different varying fan speed with selector switch for user operation. Fan and motor assembly shall be mounted on vibration isolators eliminating the need for external vibration isolators. Provision shall be made for belt tensioning. Motor should be of required capacity of Crompton Greaves/ Siemens/ ABB or equivalent of reputed OEM make. The fan should not exceed noise level of 75 db(A) from 1 m distance. A spare motor shall be provided in case of any burn out/breakdown for immediate repair/replacement which can be done by local engineer. 4-5 spare fan belts shall also be provided which can be replaced by local engineer in case of wear/tear.

- b) Exhaust Air System will be designed such that it ensures directional air flow by differential pressure gradient across different rooms and maintains minimum 6-12-fold air change per hour in the lab area (including separate exhaust ducting for BSCs installed).
- c) Ducting: Exhaust ducting (like supply) shall be made out of minimum 24 gauge GI sheet. The GI duct should be fabricated as per SMACNA standards. To prevent air leakage, all the lateral joints and flanged joints of GI ducting should be sealed using silicone sealant. All the ventilation ducting shall be leak proof and with thermal insulation (the colour of insulation material will not be black). This insulation is made of nitrile rubber or glass wool
- d) Air Filtration: The exhaust air filter handling systems shall be provided with HEPA Filters such that it protects the maintenance staff from acquiring any infections while handling/replacing the filters -Bag in Bag out system (BIBO). It is essential that the maintenance person wears PPE while doing so. The HEPA filters will be located prior to exhaust unit at a place which is easily accessible and has adequate space for BIBO to function effectively. The HEPA filter housed in BIBO should have efficiency of H13 or H14 tested as per EN1822 at MPPS (Maximum Penetrating Particle Size). The HEPA filter plenums (Containment Housing) shall be made in SS 304 (14 gauge) with air tight and leak proof construction. The

HEPA filter plenums shall be provided Isolation dampers at Inlet and Outlet and shall have provisions and facility to carry out on site HEPA filter scanning, testing and validation, magnehelic pressure gauge to monitor pressure drop across the HEPA filter, fumigation ports to allow IN-SITU decontamination of HEPA filters and Bag-In-Bag-Out facility for change/replacement of filters. HEPA Filters of 99.99% efficiency would be used in all exhaust. All the HEPA filters should have 0.3µm filtration.

- e) Supply Air system to be electrically interlocked (fans, dampers, electrical) with exhaust air system, to prevent sustained positive pressurization.
- vii. **Appropriate negative differential pressures** (for e.g. the negative pressure room where bio safety cabinets are placed shall be -12.5 Pa (-0.05" WG) relative to the anteroom, anteroom shall be -12.5 Pa (-0.05" WG) relative to change room if planned, and the change room shall be -12.5Pa (-0.05" WG) relative to the outside atmospheric pressure. Manual differential pressure gauges shall be placed outside Change Room, Ante room and main lab. Pressure balancing system to maintain room/zone pressures within specified set limits shall be provided which should be done through manual control. Magnehelic gauges used will be of DYWER/ WAREE/ WIKA or equivalent reputed OEM (Range -50 to 0 to +50 Pascals) with supporting SS Hardware with Top plate & suitable Box SS 304 including tubing & suitable fitting & accessories in wall panel.
- viii. **Fire Dampers for supply and exhaust air:** As a safety feature, fire dampers shall be provided in both supply as well as exhaust duct. In supply system it will be in between variable damper and inlet (but at an accessible point from outside). In the exhaust system it will be located in exhaust ducting coming out of the building and prior to BIBO assembly at an accessible point from outside. These dampers are curtain type made of SS interlocking blades with fusible link which melts at 74°C
- ix. **Leak proof dampers** with provision to prevent backflow of air shall be provided in supply unit (after blower motor and before volume control damper) and in exhaust unit (in between blower motor and volume control damper). It is made of SS blades with neoprene gasket

- x. **AHU SHED:** It will be required at sites where AHU is installed on roof/ outside the lab building. AHU shed with provision for fencing, door with lock-key arrangement.
- a) Framework vertically made of M S Square Pipe frame: 2 Inches X 2 Inches, 16 Gauge
- b) M S Fencing with wire mesh: ½ inch X ½ inch
- c) Supporting Structure M S Angle: 50 X 5 mm
- d) GI pre-coated corrugated profile roof sheet: 0.5 mm thick duly supported with J Hook.
- e) SWG with provision of door with lock and key

AHU Shed with fencing should be duly enamel painted and with anti-rust coating from both sides. The height covered shall be at least 8 feet. There should be no gap between roof sheet and wire mesh, if any angle creates gap, it should be covered with iron bars and wire mesh in between

3. **Electricals:**

- i. The electrical power requirement (power matrix) for the TB Containment laboratory should be calculated and provided by the lab.
- ii. Supply should be three phase supply with proper earthing and required 440 V capacity to support the functioning of AHU Unit.
- iii. **Earthing:** If earthing is not adequate, the vendor will do the necessary grounding work to ensure entire TB C&DST Lab has adequate earthing.
- iv. All the required electrical panels, cabling, switchgears, surge and spike protection system and arrangements, etc. for the purpose of energizing the TB Containment Laboratory facility shall be carried out by the contractor.
- v. All the electrical fittings and fixtures in the laboratories areas on the walls shall be sealed (all conduits, outlets shall be sealed with silicon sealant), leak proof and capable to withstand chemical exposures during fumigation.
- vi. Lighting should be on ceiling and surface mounted, LED of reputable manufacturer, suitable capacity (~18W) and arranged as per the layout provided. Light fixtures inside shall be with gasket or otherwise sealed with silicon.

- vii. The electrical power distribution scheme shall be provided to provide back-up power supply to the critical components and equipment through a UPS (to prevent any disruption of work) and through Diesel power generator set for the entire lab.
- viii. Every workbench should have at least one socket which received electrical input through UPS of TB Containment lab. Extractor fans of BSC' ducting should also receive electrical input through this online UPS of the TB Containment Lab.
- ix. Power sockets with lid (15-20 in each room) should be provided for equipment (as per the layout provided). Modular type, power sockets with lid of 5A/15A are to be provided at various locations on the wall as per discretion and strategic arrangements /provisions for lab equipment. The Sockets meant for UPS should be screen printed as (UPS) for ease of operation and identification marked wires and cables used shall be copper wire of standard make (ISI Marked) and manufacturer.
- x. **AHU Control panel:**
 - Cabling from the panel to individual AHUs and control wiring will be in the scope of HVAC contractor. However cabling up to the electrical panel will be provided by site. Termination will be done by HVAC contractor. In case of power failure, the alternate power through Main Diesel Generator Set of the Hospital Supply to be used. The Panel is to be design accordingly.
 - Housing of the AHU panel shall be GI 16 gauge powder coated, with cable inlet and outlet going through grommet and with earthing connection arrangement.
 - Multi-function meter displaying voltage, load and power factor for electricity supply to AHU panel should be present.
 - LED indicator for ON/OFF will be provided for RBY phase, AHU supply, AHU exhaust, Standby exhaust, Condensation unit, Heating Coil of Supply Unit
 - DOL Starter Switch to be provided for AHU exhaust, AHU Supply and Condensation Unit (in the order)
 - All electrical equipment used should be high quality of reputed manufacturers like VFD may be Allen Bradley, Siemens make or equivalent, MCCB may be of Havells, Legrant, Anchor, Siemens, L&T or equivalent, wiring of Havells, Polycab or equivalent make, etc.

- Control panel should show simple instructions for starting the AHU
 - Diagrams of electric circuit should be displayed on the backside of door of panel.
 - Control panel should have its lock and key (for controlled access)
 - SOP for lab condition for operating VFD with selector switch for manual operation of AHU
- xi. MCCB panel suggesting supply and safety mechanism for different sections of the lab should be provided at adequate place near AHU control panel.
4. **Fire Safety:** Fire detection and alarm system (FDA System) and fire extinguishers of Type ABC (2kg) shall be provided at strategic locations (TB Containment Room, Ante Room and outside at entrance of TB Containment Lab and near control panel, near AHU and should overall comply with fire safety guidelines).
Training will be provided for its operation.

5. Emergency Preparedness:

- a) One emergency shower and one eye wash station for each site shall be provided at strategic location in compliance with ANSI / ISEA Z358.1. The water supply for emergency shower shall be sufficient to supply at least 3 GPM for 10 minutes. Shower shall be hands free and stay open valve type. The water supply for eye wash shall be sufficient to supply 0.4 GPM (1.5 litres) for 10 minutes in low velocity flow.
- b) Emergency Exit door with panic latch door from the TB Containment Laboratory shall be provided wherever mentioned for personnel exit in case of an emergency and can also be used for equipment placement inside lab. Door should be equipped with hooter/audible alarm every time it is opened.
- c) UNINTERRUPTED POWER SUPPLY SYSTEM (UPS): A central UPS console shall be provided to cater to the extreme essential power requirement of the laboratory. All critical components like lights, Door Interlocks, exhaust blowers of BSCs and critical equipment shall be provided with uninterrupted power supply. UPS for adequate load to support the AHU for 30 minute shall be provided by vendor. Cabling and installation shall be done by contractors end.
- d) Fire and electrical safety is described in the relevant sections.

6. Interiors of the TB Containment Lab:

- i. **Modular walls:** The internal building finishes shall be monolithic, impervious, non-particle shredding, chemical resistant especially to Hypochlorite cleaning and suitable to withstand chemical use during decontamination/ fumigation. Modular wall should be made for Clean Room application, pre-engineered 60 mm thick PUF panels with GPSP Sheets with PUF insulation of minimum 38-40 kg/m³. Both surfaces should be 0.8 mm thick GPSP sheet and has to be installed along the outer walls, partitions and false ceiling to create an impervious shell which is fully sealed. The panels on either side will be coated with Epoxy painted. These panels must have good aesthetic appeal as well and have to be easily maintainable. The height of wall shall be minimum 9 feet (to accommodate BSC with its thimble and damper).
- ii. **Modular false ceiling:** The internal building finishes shall be monolithic, impervious, non-particle shredding, chemical resistant especially to Hypochlorite cleaning and suitable to withstand chemical use during decontamination/ fumigation. Modular false ceiling panels should be made for Clean Room application, pre-engineered 60 mm thick PUF panels with GPSP Sheets with PUF insulation of minimum 38-40 kg/m³. Both surfaces should be 0.8 mm thick GPSP sheet and has to be installed along the ceiling, to create an impervious shell which is fully sealed. The panels on inner side will be coated with Epoxy painted and powder coated on outer side. These panels must have good aesthetic appeal as well and have to be easily maintainable. The construction of false ceiling shall be strong to allow 1 person weighing 50-60 kg to easily walk/crawl above it for necessary work. Service window will be provided for access above false ceiling preferably outside TB containment lab.
- iii. **Flooring** shall be of 5 mm (3 mm + 2mm) of self-levelling industrial epoxy including screed compound for adhesion, 3 mm semisolid cladding of EPOXY will be applied over a uniform cemented flooring and 2 mm semi-liquid epoxy over 3 mm hardened surface with bubble free perfect smooth finishing completed in three steps: Cementing (Uniform Flooring), Hardening (3 mm epoxy) and smoothening (2mm epoxy). Epoxy used for this application will be self-levelling and clean room

compatible. Flooring outside the TB Containment facility where required for aesthetic purpose will be covered with vinyl flooring.

iv. **Doors:**

- i. Flush Door finishes shall be 45mm thick with chemical resistant, anti-fungal and anti-bacterial properties. 1.2mm thick GPSP sheet suitable to fix on 60 mm thick wall panel with provisions for double glazing glass for all door and hardware like push plates and handle on both side, lock and key, etc. PUF Panels will be with GPSP Sheets, epoxy painted on both sides and PUF insulation of minimum 38-40 kg/m³. Concealed hardware for fixing of door frames, TS-71 door closure, SS hinges, SS Door handle, SS ball bearing butt hinges, concealed tower bolt for the double door, both sides lock and key arrangement. Suitable neoprene “Y seal” type gaskets may be used between the door jam and door stop.
- ii. Door interlocking systems shall be complete with controller module, push button stations with LED indication, electromagnetic locks. To take care of malfunctioning of interlocking, alternative electrical switch to manually open the doors should be provided.
- iii. Vision Glass for doors shall be fixed type vacuumised and insulated type with 6 mm toughened glass and shall be installed for natural lightening flushed with surfaces of the door. Fixed flush to both faces of the door / wall panels to provide ease of cleaning and maintenance. No crevices / joints / sloped profiles are used for fixing the glass. This will avoid particle contamination and dust accumulation.
- v. **Covings:** Extruded aluminium anodized R75 clip-on type (Male & Female connectors) covings for entire wall to floor, wall to wall & wall to ceiling joints. Extruded aluminium double cove integrated with top track of the partition panels. Corner internal & external cove joining pieces in aluminium anodized finish. Having similar construction and finish as the walls and properly sealed with silicon sealant with wall & ceiling. Covings used in construction shall include Wall to Wall Coving - R-75, Wall to Ceiling Coving-R-75, 90°Corner, 3-D Corner, 2-D Corner
- vi. All penetrations through walls, ceiling & floors will be sealed using a suitable caulking. Caulking shall be applied around pipes and conduit. The interior of electrical and cable conduit shall also be caulked.

- vii. **Pass Box:** Pass Box (Static type) shall be provided at strategic / required locations for transfer of samples, chemicals and materials to and from the Laboratories (as indicated in the design submitted). In case of two pass box, one will be to receive the sample within and second will be for sample discard to autoclave room or for disinfected waste collection. It shall be made of SS 304, with inbuilt UVGI system, with interlocking in such a way that both doors cannot be opened simultaneously, panel mounted, with buzzer to indicate open status for any door, fixed at a height of 750 mm from floor in sandwich panel, with dimension of 610 mm (L) X 610 MM (W) X 610 MM (D), with load bearing capacity of 40 Kg, door make-Single door in each side, with glass and air tight gasket, with door latch for one door(door opening outside), with handle of superior quality, with viewing glass made of polycarbonate or 10 mm thick tempered glass, hinges made of SS304, with one LED lamp inside pass box, chemical resistant especially to Hypochlorite solution, alcohol, etc., flange to seal pass-box and sandwich panel, with indicating lamps in both sides to show status-On/OFF switches for all lamps. A SOP must be developed for pass-box decontamination.

7. Furniture inside the lab:

- a) **Laboratory work stations** (numbers as per the Lab design)- Frame shall be made up of SS 304, with nylon cushion/bushing for the legs, non-particle shredding material and shall be chemical resistant to allow chemical disinfection. It should be strong to hold the granite top/workbench as well as equipment places on the workbench. There shall be no drawers or safe in the workstation and shall have arrangement for placing the UPS below the work bench.
- b) **Garment Storage Cabinet-** One garment storage cabinet that can be locked shall be provided in the Change room/Ante Room. It shall be of SS 304 with two compartments and shelves for storage of clean items of suitably large dimension to fit in the Ante/ Change Room (size to be consulted with site i/c)
- c) **Coat hangers** 8-10 individual hangers made of SS30, in group of 4-5 each, will be provide to hang gowns/ aprons in Ante Room and change room (in consultation with site i/c)

- d) **Shoe rack** (one)- It should be made of SS 304 with 5 shelves, open type and wide enough to hold two pairs of shoes in each shelf and shall be able to fit in available space as per design.
- e) **Wash Basin** (two): Modular standalone hand washing sinks made of SS 304 with elbow or foot operated mechanism shall be provided as per design inside lab and in change or ante room. Wall hanging soap dispenser to be provided along with each wash basin unit. A Tissue paper rack with a mechanism to pull out tissue papers, will be provided near the wash basin to dry hands. Water lines that penetrate the TB Containment space shall be equipped with back-flow prevention devices. Outlet pipes should be made of PVC with closure outside lab made of SS plate.
- f) **Laboratory Stools** (five): Laboratory grade hydraulic SS stools with back support, foot rest, rotating type with castor wheels at the base, shall be provided by contractor.
- g) **Trolleys**: Two tier trolleys (two quantity) made of SS 304, size 2'x1'6" with side walls to prevent fall of items from sides and wheels at bottom for smooth movement, shall be provided. **Plus**, one similar trolley will be provided for each BSC. One of the trolleys for transportation of material from lab to the Autoclave room shall be provided with a lid to prevent direct exposure of material to outside.

8. Monitoring Mechanism: Monitoring of crucial parameters will be made available in the lab for the following:

- a) Visual display of Room Pressure, Relative humidity and temperature in the TB Containment Lab
- b) Differential pressure through Magnehelic gauges in Ante-room, Change Room (where available) and outside TB Containment Lab
- c) In the Control Panel- Multi-function meter displaying voltage, load and power factor for electricity supply to AHU panel and LED indicator for ON/OFF will be provided for RBY phase, AHU supply, AHU exhaust, Standby exhaust, Condensation unit, Heating Coil of Supply Unit
- d) CCTV footage from the various sections in the Microbiologist's room

- e) Hooter/alarm when the emergency exit door is opened as well as when fire detection system is activated in incidence of fire.

9. Connectivity:

- a) LAN wiring for internet access inside the lab with sockets to be provided at strategic locations (near work benches) in TB Containment Room.
- b) A suitable EPABX System shall be provided for the laboratory. Telephone instrument with line will be kept in Microbiologist room, Staff room and TB containment room and any other place as suggested by Site i/c. Telephone with speaker for hands free operation will be provided inside TB Containment Room.

10. SPECIALIZED LABORATORY SUPPORT EQUIPMENTS AND SYSTEMS

- a) **Split AC for MGIT:** Two wall mounted split air conditioners (of suitable tonnage according to the area of the TB Containment Lab) should be installed near to MGIT. These will be inverter ACs (minimum three star) of Hitachi/ Bluestar/ Carrier/ Lloyd/ Godrej or equivalent OEM. The outdoor unit will be suitably placed outside the lab with easy access and adequate protection from theft. Drainage pipe of ACs will be adequately long and connected into the drainage system of the institute. Both the Split ACs should be connected with alternator (Timer Control cut-off and start) for changeover every 4 hours between them so that load is distributed between both the ACs. These will be used at the end of the day when main HVAC system is not operating to provide ambient temperature for MGIT.
- b) **Biological Safety Cabinets:** Biological Safety Cabinets (BSC) will be installed, commissioned and validated inside the TB Containment Lab at the required location as per the plan. BSCs should be placed away from doors, air supply vents or other things which may disrupt the cabinet airflow. The Biological Safety Cabinets that are being procured shall be Class II A2 type. Lab upgradation agency shall coordinate/liaise with BSC Manufacturer for installation, ducting, commissioning and calibration of BSC if under warranty or newly supplied (else it shall be done by vendor). The exhaust from the Biological Safety Cabinets shall be thimble connected and individually ducted out. The external extraction fan installed at the end of the ducting should

exceed the volumetric flow rate of each BSC by 30–50%, and should be controllable, provided with easily accessible dampers and connected to an uninterrupted power supply. The air from the BSC should be ducted with ventilation pipes that have a diameter exceed 20 cm.

- c) **CCTV Monitoring Devices:** Camera to continuously monitor the activities inside and outside the TB Containment Lab by providing Central CCTV Monitor. Five/Six Camera unit should be installed(one/two outside the TB Containment lab covering the entry and corridor area, one in ante room and two inside TB Containment Room and one covering AHU Area). Supply, installation, testing and commissioning of the following shall be done:
- a) Color Camera 1/3" CCD, IR type, dome shaped, 480 TV lines resolution which work in low light.
 - b) 6 Channel standalone / Network version DVR Make: DAHUA /equivalent reputed OEM
 - c) Hard Disk with 1 TB (TERA byte) Capacity -Make -Seagate or equivalent reputed OEM
 - d) 6 Channel Power Supply of reputed Make
 - e) Supply Laying of Co-axial Cable with necessary Accessories
 - f) Wall mounted monitor (at least 20 inch LED/LCD) located in Microbiologist room or as suggested by site i/c.

11. Civil works and Plumbing:

- a) Ensure water proofing of the roof (if required) is done prior to carrying out the work. Levelling of the floor where required will be carried out the vendor. Civil works to create new door arrangement/ closure of exiting openings, sealing of the existing windows, etc. will be carried out by the vendor.
- b) Drain: All the liquid drain coming out from the laboratory shall be connected to a single drain with back flow prevention, which would be further connected to existing local ETP plant in the hospital campus if available. All drains shall be equipped with “p traps”. Penetrations made in walls and floors must be properly sealed.
- c) Water connections for the emergency shower and eye wash and wash basins to be appropriate provided.

- d) Ensure that pipes and connections are leak proof to avoid flooding behind modular walls.

12. Labelling to be done as per following details:

- a) Biohazard label should be placed outside the laboratory.
- b) Labels for all switches (to be provided) including in the MCCB panels, LT Panel and AHU Control panel
- c) Labelling of the TB Containment Lab and Ante Room/ Change room including Emergency exist.
- d) TB Containment laboratory layout should be provided at the entrance of Lab

13. Final performance and capacity testing and validation: All the certification and validation parameters for TB Containment Lab must be done in accordance in with NIH certification requirement. BSCs will be validated and calibrated as per NSF 49and EN 12469 standards.

- a) There will be periodic mid-term assessment of the project (after plumbing, electrical works, ducting and AHU installation, construction of interiors and dry run) by identified technical people and Site i/c to assess the timely and proper execution of the project.
- b) After completion of the construction and installations, the entire laboratory facility, all the equipment, systems and services shall be validated by the contractor under supervision of a committee of the consultants / client or lab i/c as follows:
 - i. For Bio Safety Cabinet:
 - Validation of BSC: Particle count test, PAO (Filter Integrity test for pre-filters, filters ULPA filter/ HEPA filters), Air in-flow velocity and down-flow velocity test as per NSF 49and EN 12469 standards with devices traceable to National/International Standards, UV and Fluorescent light intensity
 - Maintenance of the BSC to be carried out if existing one to be used (and not covered under warranty) i.e. complete and thorough cleaning of working Area of cabinet, cleaning of exhaust filter from the top to eliminate and external clogging or disturbance and inspection of ducting, cleaning and oiling of sliding sash movement system, checking of switches, tube lights

and UV light fittings, checking of airflow and exhaust system, calibration and validation of Magnehelic Gauges if existing, etc.

ii. For TB Containment Lab- The installation as a whole shall be balanced, tested and validated upon completion, and all relevant information, including the following shall be submitted to the Institution

- ⇒ Pressure in each room/zone as per the design, differential pressure readings including across filters.
- ⇒ Air inflow velocity and outflow velocity test across all inlets and outlets to measure/derive air change rate per hour (minimum 6-12 ACH) and as per design
- ⇒ Smoke pattern test for directional airflow should be performed during validation including for Passbox.
- ⇒ Temperature shall be maintained at $22^{\circ}\text{C}\pm 2$ and humidity level should be maintained at $60\pm 10\%$
- ⇒ HEPA Filter (in BIBO) integrity test based on PAO test and manufacturer's certifications
- ⇒ Electrical current readings, in amperes on full load work, average running, and on starting, Testing of power cabling, earthing, AHU control panel, MCCB panel and LT panels
- ⇒ Containment room -the walls, floors, ceilings, penetrations, and other containment barrier features have adequate integrity
- ⇒ Operational performance testing for
 - HVAC including Blower motors in the Supply, exhaust including emergency, extractor of BSC ducting and condensation unit
 - Ducting for any potential leakages and insulation breakage
 - Dampers including variable control, leak proof and fire control (only verification)
 - Magnehelic Gauges
 - Temperature control sensors; pressures control sensors,
 - Passbox
 - Split ACs

- Fire Detection system
- EPABX System
- Access Control System
- CCTV System
- UPS Back up system
- Emergency Shower and eye wash station
- Interlocking of supply blower motor and exhaust blower motor

c) Prior to validation, the contractor shall prepare and submit a detailed 'Validation Document' for approval.

- i. The Validation Document shall provide the detailed procedure for validation, parameters for validation, validation schemes and formats for recording the validation details.
- ii. The contractor shall arrange to do a mandatory third party validation
- iii. The contractor shall arrange for all the instruments, tools, manpower etc. required for the validation. The validation results shall be recorded and documented and shared with the site and hiring/funding agency.

d) The above validation tests shall be performed Annually during the warranty as well as maintenance period

In addition to the above validation tests, preventive maintenance servicing of all installations, operational performance testing as listed above shall be carried out on a quarterly basis during the maintenance as well as defects liability period.

14. Maintenance Services: After the completion of defect liability and warranty period of two years, it will be appropriate to have a longer term maintenance of the upgraded lab for a period of at least three years through the same agency who upgraded the lab. Apart from annual validation and quarterly preventive maintenance servicing as described above, it should include attending breakdown maintenance calls as and when required, repair/replacement of compressors, refrigerant gas charging of condensing units, besides replacement of spares required (due to wear and tear) at pre-fixed rates.

15. Training of personnel: Institution personnel to be trained over 2 days for:

- a. Operation of HVAC Plant and all other equipment and systems.

- b. Adjustments of settings for controls and protective devices
- c. Servicing and Preventive maintenance
- d. Emergency response training.

16. Guidelines & Standards for reference:

- a. *Bio safety in Microbiological and Biomedical Laboratories, 5th edition, 2007 (CDC/NIH BMBSL).* This guideline recommends minimum facility and operational requirements for laboratories working with biological hazards. Primary Containment for Biohazards: Selection, Installation and Use of Biological Safety Cabinets,
- b. Canadian Tuberculosis Standards 6th Edition
- c. American Society of Heating, Refrigeration and Air-Conditioning Engineers, Inc. *Laboratory Design Guide – 2001*
- d. NIH Design Policy and Guidelines, 2008
- e. American National Standards Institute (ANSI)
- f. NIH BSL 3 Certification requirement, 2006
- g. WHO TB Containment Lab Biosafety Manual, 2012

17. Submission of specialized systems and services layout schemes prior to initiation of the work: Conceptual layout plans and schematic drawings of various specialized services and utilities showing tentative locations of equipment and furniture such as to be submitted before initiating work at site for approval to hiring agency and site i/c

- a) HVAC system
- b) Air filtration system
- c) Pressure control system including differential pressure zones
- d) Fire Detection and Alarm system
- e) Air distribution System including ACH
- f) Electrical distribution system
- g) Monitoring system including CCTV and three important parameter monitoring (pressure, temp and humidity)
- h) Water supply and drainage system
- i) AHU Control Panel System with VFD controls and SOP for lab condition for operating VFD with selector switch for manual operation of AHU

- j) Chart for defining the AHU fan and its speed for air quantity being delivered by supply and exhaust blower at different speed
- k) Un-interrupted Power Supply system
- l) Specialized laboratory support equipment/ primary containment barriers such as
 - Pass boxes
 - Entry exit protocols

18. Documents for final submission: The following documents are required to be submitted after Final assessment and validation of TB Containment Lab for verification and approval to hiring agency and to the lab within 15 days of completion of successful validation.

- a. The drawings and layout of each final commissioned TB Containment laboratory should be shared with site and hiring/funding agency (both in soft and hard copy) for verification.
- b. All Test Certificates / Maintenance manuals / As Built drawings / Spare Part List should be submitted to site and hiring/funding agency after validation within one week.
- c. Detailed document on Laboratory Validation Procedures and to include as per table;

Submission of validation documents as per followings.
Design Qualification
Installation Qualification
Performance Qualification
Operational Qualification
All Test Certificates / Maintenance manuals/ As Built drawings / Spare Part List.

DOCUMENTS TO BE SUBMITTED BY THE BIDDER ALONG WITH THEIR BIDS FOR TECHNICAL QUALIFICATION AND EVALUATION

Project Implementation Methodology including

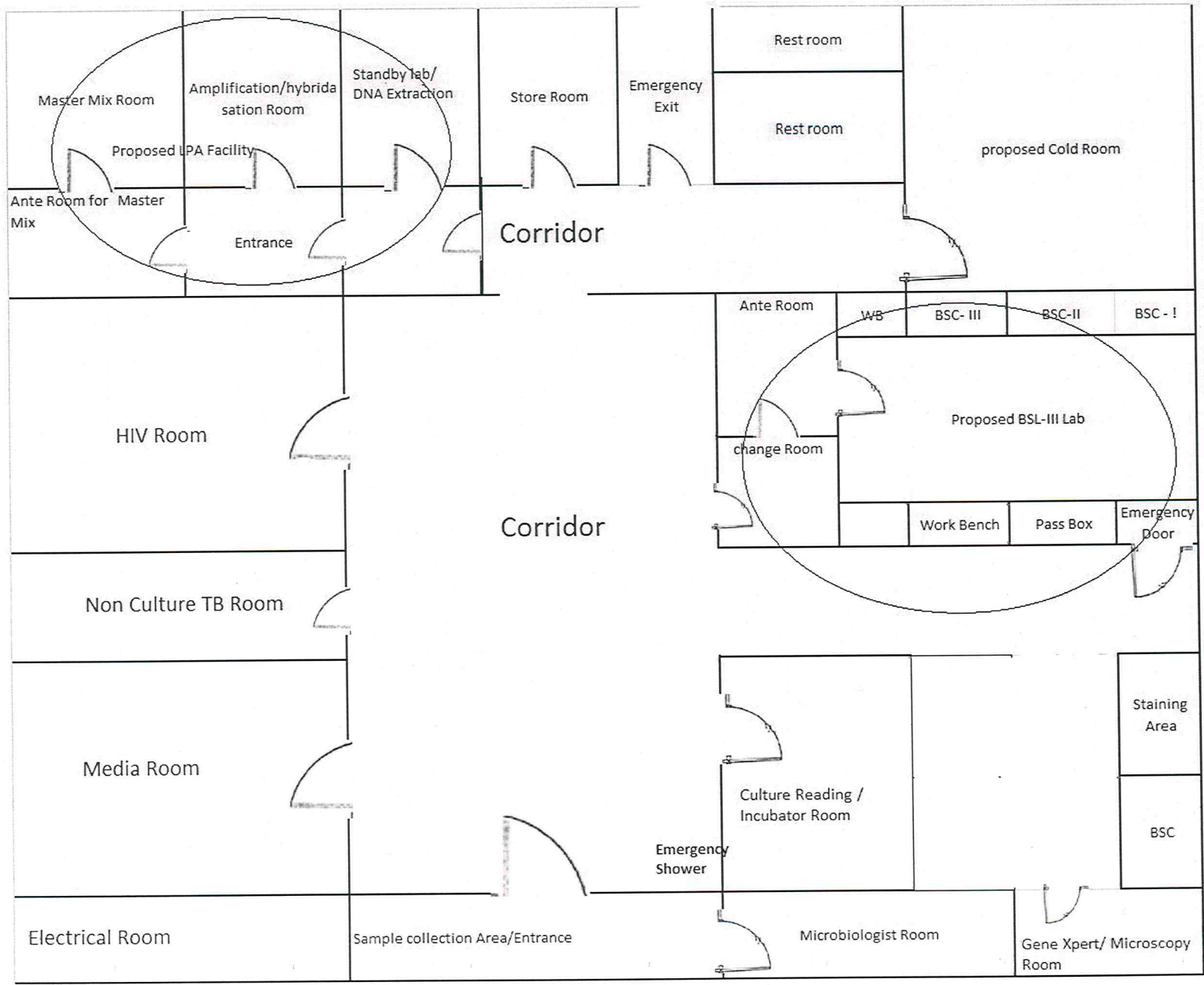
- Past experiences of developing labs including TB Containment labs (with contact details of at least 5 such)

- Team (members and their qualifications) which will be building the TB Lab (including designing, HVAC and ducting team, electrical, plumbing, civil works team, interiors developing team, etc.)
- Architectural layout plans- including any comments/ concerns about the design provided
- Men & Materials movement layout plans- Conceptual layout plans showing movement of men & materials into and within the Laboratory areas clearly highlighting the measures/ preventions for control of spread of infection/contamination into and within the Laboratory
- Schematic Diagram of HVAC system for each lab should be mentioned and submitted for the labs quoted
- Detail specification of HVAC components lab should be mentioned and submitted for the labs quoted
- AHU Calculation for each lab should be mentioned and submitted for the labs quoted
- Zoning plans: Plans indicating details of zoning and separation/isolation of different classified, non- classified and contaminated areas/zones, relative pressurization, Air change rates, air re-circulation rates and sterility requirements, decontamination control, services etc. for different areas/zones.
- Total Power requirement and heat load including buffer of 20-25% for each lab should be mentioned and submitted
- List of Construction Material and Equipment Proposed for construction of the laboratory along with specifications including manufacturers (OEM) along with warranty period (as specified by Manufacturer) should be clearly mentioned and submitted as per table (Annexure 2) given below for the labs quoted. Any additional material proposed for construction by bidder may also be specified in the same table.
- Certificates complying to refer standard for filters and HEPA filters should be mentioned and submitted.
- **Services & Utilities schemes**
 - Power supply and distribution system

- Water supply and distribution system
- Internal/external communication system
- Disinfection/decontamination system
- Laboratory Validation Procedures and Details including design qualification, installation qualification, performance and operational qualification
- GANTT Chart informing timelines for executing the various stages of work

Annexure 1

Layout of the lab and details of the Sites for TB Containment Laboratory Infrastructure Establishment.



PROPOSED LABORATORY PLAN

ANNEXURE –2

Technical Compliance sheet along with proposed specifications / make / manufacturer to be submitted by Bidder

- List of Construction Material and Equipment Proposed for Construction of the Laboratory along with specifications including manufacturers (OEM) along with warranty period (as specified by Manufacturer) should be clearly mentioned and submitted with ITB as per table given below. Any additional material proposed for construction by bidder may also be specified in the same table.

Sl. No.	Item Description	Manufacturer	Specification with capacity (wherever applicable) and warranty as specified by Manufacturer	Proposed Makes/ Manufacturers
1	Thermal Insulation			
2	HEPA Filter H14			
3	Diffusers, Grilles			
4	Airtight and Gastight Isolation Dampers			
5	VAV Dampers & Leak Dampers			
6	Fire Damper			
7	Magnehelic Gauge			
8	Containment HEPA filter housing with filter			
9	BIBO Indigenous			
10	AHU and Ventilation units			
11	AHU Plenum filters G4, F7			
12	AHU Blower - Supply & Exhaust			

Sl. No.	Item Description	Manufacturer	Specification with capacity (wherever applicable) and warranty as specified by Manufacturer	Proposed Makes/ Manufacturers
13	AHU Motor - Supply & Exhaust			
14	Condensing Unit			
15	HVAC Control Valves			
16	Modular Material for ceiling and walls			
17	GI sheets			
18	Epoxy flooring material			
19	Distribution Boards			
20	LT switchgear (ACB, MCCB, MCB, ELCB, RCCB, contactors, SFUs)			
21	FUSE			
22	VFD			
23	Timers			
24	Portection Relays			
25	Selector switches			
26	Change over switch			
27	Ammeters, Voltmeters			
28	Indication Lamps (LED Type)			
29	Push Buttons			
30	PF Meters			
31	Energy Meter			
32	Electrical Multi Function Meters			
33	Load Managers			

Sl. No.	Item Description	Manufacturer	Specification with capacity (wherever applicable) and warranty as specified by Manufacturer	Proposed Makes/ Manufacturers
34	Current Transformers (Cast Resin)			
35	Telephone Tag Box			
36	Industrial type Metallic plug sockets			
37	Modular switches, socket outlets, LED ceiling lights			
38	PVC conduits, Accessories			
39	MS Structural's			
40	Copper Wires			
41	XLPE insulated, armoured			
42	Aluminium conductor cables			
43	Telephone, Co-axial wires & Cables			
44	Data Cables (CAT 5e, 6)			
45	Control Junction Boxes			
46	Network switches			
47	CCTV & Cameras			
48	UPS			
49	LED Monitor			
50	Door Interlock and Access Control System			
51	Smoke Detectors			
52	Addressable analogue main panel			
53	Fire alarm system			

Sl. No.	Item Description	Manufacturer	Specification with capacity (wherever applicable) and warranty as specified by Manufacturer	Proposed Makes/ Manufacturers
54	Differential Pressure Switch			
55	Temperature Sensor			
56	Temperature Transmitter			
57	Temperature Display			
58	Humidity Sensor			
59	Humidity Transmitter			
60	Humidity display			
61	Pressure sensor			
62	Pressure transmitter			
63	Pressure display			
64	3-Channel Monitor display with audio-visual alarm system, wiring & accessories			
65	Vinyl flooring for passage/corridor			

Note:

- i. Attach separate sheets for specifications and manufacturers catalogues/brochures for construction materials and equipment proposed.
- ii. Use separate table as above for each Schedule, if required.

Note: Bidders shall furnish technical compliance statement for the model quoted, details of manufacturer including deviations if any. Technical catalogue /data sheet shall also be furnished in support of technical compliance statement with out fail.

SECTION VI-A : QUALIFICATION CRITERIA

(Referred to in Clause 11.2 of ITB)

For determining the lowest-evaluated bid, the Purchaser shall carry out the post qualification of the Bidder in accordance with ITB Clause 11.2, using only the requirements specified. Requirements not included in the text below shall not be used in the evaluation of the Bidder's qualifications

The Bidder shall furnish documentary evidence to demonstrate that it meets the following experience requirement(s):

1. Manufacturer Bidders

- (i) *The bidder must have manufactured and supplied satisfactorily the similar model **quoted** in each schedule of the Schedule of Requirements either directly or through of any other authorized dealer to the extent of at least 1 No. under "Section – V, Schedule of Requirements" in any one of the last five years **of which minimum 1 No. should have been supplied to Indian Institution** and should be in use satisfactorily with no adverse report for at least one year preceding the date of bid opening.*
- (ii) *The Bidder should furnish a brief write-up, backed with adequate data, explaining his available capacity and experience (both technical and commercial) for the manufacture and supply of the required equipment within the specified time of completion after meeting all their current commitments.*
- (iii) *The bidder should clearly confirm that all the facilities exist in his factory for inspection and testing and these will be made available to the purchaser or his representative for inspection.*

2. Non- Manufacturer Bidders

*In the case of a Bidder offering to supply Goods under the Contract that the Bidder does not manufacture or otherwise produce, **the Bidder should be duly authorized by the manufacturer of the Goods who meets the criteria under (1) above** (all supporting documents/information as asked above for manufacturer shall be submitted with the bid) and*

- a) *The manufacturer furnishes a legally enforceable authorization in the prescribed Form [Section XI] assuring full guarantee and warranty obligations as per GCC and SCC for the goods offered; and*
- b) *The bidder, as authorized by the manufacturer, must have supplied and provided after sales service to the extent of at least 1 No. of the quantities of **similar model** in the Schedule of Requirements in any one of the last five (5) years **to Indian Institution**, which must be in satisfactory operation at least for one year on the date of bid opening.*

3. Common to Both Manufacturer and Bidder

(i) The information on past supplies and satisfactory performance should be given in the Proforma given under Section-X.

(ii) Documentary evidence (end users certificate) in support of the satisfactory operation of the goods as specified above shall invariably furnished.

(iii) Data to support that the manufacturer has the financial and production capacity to perform the contract and complete the supplies within the stipulated delivery period shall be furnished. for the non-manufacturer bidder data to support that he has the financial capacity to perform the contract and complete the supplies within the stipulated delivery period shall be furnished. Reports on financial standing shall be in the form of profit and loss statements, balance sheets and auditors report for the past three years, bankers certificate, etc.,

a) The bidder should have a manufacturing capacity of at least 9 Nos. similar capacity machines per annum certified by licensing authority/ chartered accountant.

b) The annual sales turnover for the bidder should be at least Rs.54.00 lakhs in any one of the last three years (2014-2015 to 2016-2017), and it should be certified by the chartered accountants.

c)The bidder should have a cash/ credit limit of at Rs.13.50 lakhs with their bankers exclusively for this contract and a certificate for the above shall be furnished by the bankers.

(iv) Further, the manufacturer should be in continuous business of manufacturing / supplying and after sale services of products similar to that specified in the 'Schedule of requirement' during the last 5 years prior to bid opening. In case of non-manufacturer bidders, this condition should be satisfied by the manufacturer of the product.

(v) The legal status, place of registration and principal place of business of the company or firm or partnership, etc.;

Notwithstanding anything stated above, the purchaser reserves the right to assess the bidder's capabilities and capacity to execute the contract satisfactorily before deciding on award

Even though the bidders meet the above qualifying criteria, they are subject to be disqualified if they have made misleading or false representations in the forms, statements and attachments submitted in proof of the qualification requirements; and/or record of poor performance such as, not properly completing the contract, inordinate delays in completion, litigation history, or financial failures etc.

Note:

1) The above post qualification requirements are to be met by the bidder (in case of manufacturer bidders) and the bidder and the manufacturer respectively (in case of non manufacturer bidders) and qualification of group/sister/parent companies will not be considered for meeting the above requirement.

2) *For the purpose of furnishing documentary evidence to meet the post qualification criteria, the bidder should furnish the following:*

- a. *The supply made to public sector/Government units in India/private sector, the bidder should submit an affidavit confirming that the performance statement given is correct along with copy of purchase order, copy of invoices, proof of payment received from Purchasers, documentary evidence (end user certificate) in support of satisfactory completion of orders and function as stated above.”*
- b. *The foreign manufacturer is permitted to submit an affidavit in their letter head duly signed by the authorized signatory of the manufacturer confirming that the performance statement given is correct.*

SECTION VII : BID FORM AND PRICE SCHEDULES

Date:.....200
Contract No.....

To:

Gentlemen,

Having examined the Bidding Documents including Addenda Nos....., the receipt of which is hereby duly acknowledged, we, the undersigned, offer to supply and deliver.....

(Description of Goods and Services) in conformity with the said Bidding Documents for the sum of..... (Total Bid amount in Words and Figures) or such other sums as may be ascertained in accordance with the Schedule of Prices attached herewith and made part of this bid.

We undertake, if our bid is accepted, to deliver the goods in accordance with the delivery schedule specified in the Schedule of Requirements.

If our bid is accepted we will obtain the guarantee of a bank in a sum equivalent to 5% of the Contract Price for the due performance of the Contract, in the form prescribed by the **Purchaser**.

We agree to abide by this bid for a period of(Number) days from the date fixed for bid opening under Clause 20 of the Instruction to Bidders and it shall remain binding upon us and may be accepted at any time before the expiration of that period.

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.

We understand that you are not bound to accept the lowest or any bid you may receive.

Dated this..... day of 200..

Signature :
(in the Capacity of) :

Duly Authorized to sign bid for and on behalf of
.....

PRICE SCHEDULE

1	2	3	4	5					6	7	8
				PRICE FOR EACH UNIT							
Sch No.	Item Description	Country of origin	Quantity & Unit	Ex-factory Ex-warehouse Ex-showroom off-the shelf for CIF (a)	Packing & forwarding (b)	Inland transport, Insurance and Incidental costs incidental to delivery (c)	Incidental services as listed in clause 7 of SCC (d)	Customs duty (e)	Unit price a+b+c+d+e	Total price per schedule for delivery at final destination (4 x 6)	GST – IGST/CGST/ SGST payable if contract is awarded
1.	Construction, Testing, Commissioning and Validation of TB Containment Laboratory as per specification		1 No.								

i. Unit price in (6) (Rs. in words)

1. Construction, Testing, Commissioning and Validation of TB Containment Laboratory as per specification with HSN Code/rate of GST.....

a) Annual Maintenance Charges (labour only) per year /per unit for 7 years after 3 years free warranty maintenance period

1. Construction, Testing, Commissioning and Validation of TB Containment Laboratory as per specification with HSN Code/rate of GST.....

b) Annual Maintenance Charges (Comprehensive) for 7 years / per year / per unit after free warranty maintenance period

1. Construction, Testing, Commissioning and Validation of TB Containment Laboratory as per specification with HSN Code/rate of GST.....

Note:

- (a) In case of discrepancy between unit price and total price, the unit price shall prevail.
- (b) **This price schedule should be placed in separate sealed cover “Cover B”**
- (c) **GST applicable for Annual Maintenance Charges shall be indicated separately.**
- (d) **The bidder should indicate the HSN code of the equipment/ service and applicable GST rates.**
- (e) **The bidder should quote for the prices separately from column 5(a) to 5(e) and should not state “as inclusive”.**

Place :

Signature of Bidder.....

Date :

Name

Business Address

SECTION VIII : CONTRACT FORM

SECTION VIII: CONTRACT FORM

THIS AGREEMENT made the day of, 20..... between (Name and Address of *Purchaser*) represented by the Managing Director (hereinafter “the *Purchaser*”) of one part and(Name and Address of Supplier) (hereinafter “the Supplier”) represented by (Name of the Authorized Signatory and Designation), Aged years, residing at (Full Residential Address of the Signatory) of the other part:

WHEREAS the *Purchaser* is desirous that certain Goods and ancillary services should be provided by the Supplier, viz., (Brief Description of Goods and Services) and has accepted a bid by the Supplier for the supply of those goods and services in the sum of (Contract Price in Words and Figures) (hereinafter “the Contract Price”).

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract referred to.
2. The following documents shall be deemed to form and be read and constructed as part of this Agreement, viz.:
 - (a) the Bid Form and Price Schedule submitted by the Bidder;
 - (b) the Schedule of Requirements;
 - (c) the Technical Specifications;
 - (d) the General Conditions of Contract;
 - (e) the Special Conditions of Contract; and
 - (f) the *Purchaser*'s Notification of Award
3. In consideration of the payments to be made by the *Purchaser* to the Supplier as hereinafter mentioned, the Supplier hereby covenants with the *Purchaser* to provide the Goods and Services and to remedy defects therein in conformity in all respects with the provisions of the Contract.
4. The *Purchaser* hereby covenants to pay the Supplier in consideration of the provision of the Goods and Services and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

BRIEF PARTICULARS OF THE GOODS AND SERVICES WHICH SHALL BE SUPPORTED / PROVIDED BY THE SUPPLIER ARE:

S.No.	Brief Description of goods	Quantity to be Supplied	Unit Price	Total Amount (3 x 4)	Sales Tax & other Taxes Payable
1	2	3	4	5	6

Total Value: 5 + 6

Delivery Schedule:

IN WITNESS whereof the parties hereto have caused this Agreement to be executed in accordance with their respective laws the day and year first above written.

Signed, Sealed and Delivered by the
 said (For the **Purchaser**)
 in the presence of

Signed, Sealed and Delivered by the
 said(For the Supplier) (Signature, Name, Designation and Address with Office seal)
 in the presence of

- 1) (Signature, Name and Address of witness)
- 2) (Signature, Name and Address of witness)

SECTION IX : PERFORMANCE SECURITY FORM

SECTION IX: PERFORMANCE SECURITY FORM

To : _____ (Name of *Purchaser*)

WHEREAS (Name of the Supplier) herein called “the Supplier” has undertaken, in pursuance of Contract No..... dated, to supply (Description of Goods and Services) hereinafter called “the Contract”.

AND WHEREAS it has been stipulated by you in the said Contract that the Supplier shall furnish you with a Bank Guarantee by a recognised bank for the sum specified therein as security for compliance with the Supplier’s performance obligations in accordance with the Contract.

AND WHEREAS we have agreed to give the Supplier a Guarantee

THEREFORE WE hereby affirm that we are Guarantors and responsible to you, on behalf of the Supplier, upto a total of (Amount of the Guarantee in Words and Figures) and we undertake to pay you, upon your first written demand declaring the Supplier to be in default under the Contract and without cavil or argument, any sum or sums within the limit of (Amount of Guarantee) as aforesaid, without your needing to prove or to show grounds or reasons for your demand or the sum specified therein.

This guarantee is valid until the day of 200.

Signature and Seal of Guarantors

.....

.....

.....

Date 20

Address

.....

.....

SECTION X: PERFORMANCE STATEMENT

(Please see Clause 11.2(b)
(ii) of Instructions to Bidders)

SECTION X

Proforma for Performance Statement (for a period of last five years)

Bid No.

Name of the Firm

Order placed by (Full Address of Purchaser) (1)	Order No. and Dated (2)	Description and Quantity of ordered equipment	Value of order	Date of Completion of delivery	Remarks indicating reasons for late delivery, if any	Has the equipment been satisfactorily functioning? (Attach a certificate from the Purchaser/Consignee)
				As per Actual Contract		

Signature and Seal of the Bidder

.....

SECTION XI

(Please see Clause 11.2(a) of Instructions to Bidders)

MANUFACTURER'S AUTHORISATION FORM

No..... dated

To

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

Dear Sir,

IFB No. _____

We _____ who are established and reputable manufacturers of _____ having factories at _____ and _____ do hereby authorise M/s. _____ (Name and address of Representative) to submit a bid, and subsequently negotiate and sign the contract with you against the above IFB NO.

No company or firm or individual other than M/s. _____ are authorized to bid, negotiate and conclude the contract in regard to this business against this specific IFB.

We hereby extend our full guarantee and warranty as per Clause 14 of the General Conditions of Contract for the goods offered for supply against this invitation for bid by the above firm.

Yours faithfully,

(Name)
for and on behalf of M/s. _____
(Name of manufacturers)

Note: This letter of authority should be on the letterhead of the manufacturing concern and should be signed by a person competent and having the power of attorney to bind the manufacturer.

SECTION - XII

AFFIDAVIT

(In Rs.10 NJ Stamp Paper)

- 1) I _____ S/o. _____ residing at No. _____ proprietor / partner / Managing Director of _____ (Proprietary concern / Partnership firm / Company) carrying on business at No. _____ do hereby solemnly affirm and sincerely state as follows:-
- 2) I state that our concern / company participated in the tender Ref. for the _____ supply of _____ with Tamilnadu Medical Services Corporation Ltd.,
- 3) Our concern / company had supplied _____ nos. of similar equipment for the hospitals detailed below and the same is considered by us to meet the post qualification criteria prescribed in the tender above.

Sl.no	Date of Invoice	Name of the Item and model	Name and address of Hospital / Institution supplied	Date of Installation *	Date of end user performance certificate *

- 4) I satisfy that the equipment supplied to the above hospitals are working well and being maintained by us. The complaints received from the hospitals are attended to on time as per the Annual Maintenance Contract entered between us.
- 5) The performance certificate, invoice copy and payment proof are attached for the above supply

Solemnly affirm at _____

Signed before me _____

Chennai on this _____

Day 20__ and signed in _____

my presents _____

(Notary Public)

** The period between the date of installation and date of end user performance certificate (Not installation certificate) should be more than one year on the date of bid opening.*