Tender Document

Punjab Forensic Science Agency (PFSA)

"Service Level Agreement (SLA) for Operations and Maintenance of HVAC & BMS"

FSA-441

Punjab Forensic Science Agency (PFSA)

Home Department, Government of the Punjab

Head Office: PFSA Thokar Niaz Baig, Multan Road, Lahore. Pakistan

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1- **Important Note:**

Bidders must ensure that they submit all the required documents indicated in the Bidding Documents without fail. Bids received without, undertakings, valid documentary evidence, supporting documents and the manner for the various requirements mentioned in the Bidding Documents or test certificates are liable to be rejected and bidder will be disqualified. The data sheets, valid documentary evidences for the critical components as detailed hereinafter should be submitted by the Bidder for scrutiny. It is intimated that no objection shall be entertained regarding the terms and conditions of the Bidding Document at the later stages during tender process.

Applicability of Punjab Procurement Rules, 2014

This Bidding Process will be governed under Punjab Procurement Rules, 2014, as amended from time to time and instructions of the Government of the Punjab received during the completion of the project

2- Invitation to Bid

2.1 PPRA Rules to be followed

Punjab Procurement Rules 2014 will be strictly followed. These may be obtained from PPRA's website: http://ppra.punjab.gov.pk/PublicPages/prorules1.aspx

In this document, unless otherwise mentioned to the contrary, "Rule" means a Rule under the Punjab Procurement Rules 2014.

2.2 Mode of Advertisement(s)

As per Rule 12(1), this Tender is being placed online at PPRA's website, as well as being advertised in print media.

All prospective bidders are required to enclose photo copy of DD/P.O. of Rs. 2000/- in favor of **"Director General, Punjab Forensic Science Agency**" with the bids, OR Original Receipt of Tender Purchased, **else wise the bid will stand rejected.**

2.3 Type of Open Competitive Bidding

As per Rule 38, 2(a), Single Stage - Two Envelope Procedure shall be followed. This is as follows:

i. The bid shall comprise of a single package containing two separate envelopes. Each envelope shall contain separately the financial proposal and the technical proposal;
ii. The envelopes shall be marked as "FINANCIAL PROPOSAL" and "TECHNICAL PROPOSAL" in bold and legible letters to avoid confusion;
iii. Initially, only the envelope marked "TECHNICAL PROPOSAL" shall be opened;
iv. The envelope marked as "FINANCIAL PROPOSAL" shall be retained in the custody of the procuring agency without being opened;
v. The Purchaser shall evaluate the technical proposal in a manner prescribed in Section 7, 13 and Annexure-A of this document, without reference to the price and reject any proposal which does not conform to the specified requirements as listed in said Sections.
vi. During the technical evaluation no amendments in the technical proposal shall be permitted;
vii. The financial proposals of technically qualified bidders shall be opened publicly at a time, date and venue announced and communicated to the bidders in advance;
viii. After the evaluation and approval of the technical proposal the procuring agency, shall at a time within the bid validity period, publicly open the financial proposals of the technically accepted and qualified bids only. The financial proposal of bids found technically non-responsive shall be returned un-opened to the respective bidders.

In accordance with these rules, interested companies (hereinafter referred to as "Bidders") applying for

bids should submit two separate **bids/envelopes for Financial Proposal and Technical Proposal.**

2.4 Bidding Details (Instruction to Bidders)

All bids must be accompanied by a call deposit equivalent PKR **(CDR/Payorder/Banker's Cheque/Demand Draft) of 02% of total estimated price (8,448,000/-) in favor of "Director General, Punjab Forensic Science Agency, Lahore"**. The bids along with the CDR, Tender Forms, Affidavits, etc., must be delivered into the Tender Box, placed at reception of Punjab Forensic Science Agency, Lahore on or **before 11:00 hrs no later than 12.09.2023.** The Technical bids will be publicly opened in the Punjab Forensic Science Agency, Head Office: PFSA Thokar Niaz Baig, Multan Road, Lahore, **at 11:30 hours** on the last date of submission of bids.

Queries of the Bidders (if any) for seeking clarifications regarding the specifications must be received in writing to the Purchaser within five working days from the date of Tender advertisement. Any query received after five working days shall not be entertained. All queries shall be responded to within due time. PFSA may host a Q&A session, if required, at PFSA premises (Punjab Forensic Science Agency, Head Office: PFSA Thokar Niaz Baig, Multan Road, Lahore). All Bidders shall be informed of the date and time in advance.

The bidder must submit bids on the basis of complete Tender. Failure to meet this condition will cause disqualification of the bidder. The bidder shall submit bids which comply with the Bidding Document. Alternative bids will not be considered. The attention of bidders is drawn to the provisions of Clause on **"Determination of Responsiveness of Bid"** regarding the rejection of Bids, which are not substantially responsive to the requirements of the Bidding Document.

The Primary Contact & Secondary Contact for all correspondence in relation to this bid is as follows:

Primary Contact

Assistant Director (P),
Punjab Forensic Science Agency
Lahore

Secondary Contact

Procurement Section,
Punjab Forensic Science Agency
Lahore

Bidders should note that during the period from the receipt of the bid and until further notice from the Primary Contact, all queries should be communicated via the Primary Contact and in writing (e-mail) only. In the case of an urgent situation where the Primary Contact cannot be contacted, the bidder may alternatively direct their enquiries through the Secondary Contact.

Bidders are also required to state, in their proposals, the name, title, fax number and e-mail address of the bidder's authorized representative through whom all communications shall be directed until the process has been completed or terminated.

The Purchaser will not be responsible for any costs or expenses incurred by bidders in connection with the preparation or delivery of bids. As authority competent to accept the tender, the Purchaser reserves the right to cancel the tender, accept or reject one or all bids without assigning any reason thereof.

Failure to supply required items/services within the specified time period will invoke penalty as specified in this document. In addition to that, Call Deposit (CDR) amount will be forfeited and the company will not be allowed to participate in future tenders as well.

TERMS AND CONDITIONS OF THE TENDER

3. Definitions

3.1 In this document, unless there is anything repugnant in the subject or context:

3.2 "Client/Procuring Agency/Purchaser" means the Punjab Forensic Science Agency (PFSA) or any other person/entity for the time being or from time to time duly appointed in writing by the Purchaser to act as Purchaser for the purpose of the contract.

3.3 "Confirmation" means confirmation in writing.

3.4 "Contractor/Bidder/Tenderer" means an entity/company/organization that is a registered bidder with the Purchaser and has submitted its bid as per the criteria/specifications listed.

3.5 "Contractor" means any entity or person that may provide or provides the services to any of the public sector organization under the contract.

3.6 "Contract" means the contract proposed to be entered into between the procuring entity and the Bidder, including all attachments, appendices, and all documents incorporated by reference therein.

3.7 "Contract Price" means the price payable to the Contractor under the Contract for the full and proper performance of its contractual obligations.

3.8 "Day" means a standard business working day.

3.9 "Fraudulent and Corrupt practices" will have the same bearing and meaning as are defined in the Punjab Public Procurement Consultancy Services Rules 2012.

3.10 "Government" means the Government of Punjab.

3.11 "In writing" means communicated in written form e.g., by mail, e-mail or fax, delivered with proof of receipt.

3.12 "Person" individual, association of persons, firm, company, corporation, institution and organization, etc., having legal capacity.

3.13 "Personnel" means professionals and support staff provided by the bidder that are assigned to perform the Services or any part thereof.

3.14 "Pre-Bid Conference" means the meeting conducted by the procuring entity prior to actual date of bid opening.

3.15 "Procurement Methods" means any one of the procurement modes / methods as provided in the Punjab Procurement Rules 2014 published by the Punjab Procurement Regulatory Authority (PPRA), Government of Punjab.

3.16 "Proposal" means the Technical Proposal and the Financial Proposal for the provision of the Services submitted by a bidder in response to RFP.

3.17 "RFP" means Request for Proposals, including any amendments that may be made by the procuring entity for the selection of bidder.

3.18 "SBD" means Standard Bidding Documents.

3.19 "Services" means the tasks to be performed by the bidder pursuant to the Contract as listed under Annex-A.

3.20 "Works" means work to be done by the Contractor under the Contract.

3.21 Contract Price " monthly amount of the required services inclusive of taxes

4. Headings and Titles

In this document, headings and titles shall not be construed to be part thereof or be taken into consideration in the interpretation of the document and words importing the singular only shall also include the plural and vice versa where the context so requires.

5. Notice

5.1 In this document, unless otherwise specified, wherever provision is made for exchanging notice, certificate, order, consent, approval or instructions amongst the Contractor, the Purchaser and the Client, the same shall be:

5.1.1 in writing;

5.1.2 issued within reasonable time;

5.1.3 served by sending the same by courier or registered post to their principal office in Pakistan or such other address as they shall notify for the purpose; and

5.1.4 The words "notify", "certify", "order", "consent", "approve", "instruct", shall be construed accordingly.

6. Tender Scope

Punjab Forensic Science Agency (PFSA), (hereinafter referred to as "the Purchaser") invites / requests Proposals (hereinafter referred to as "the Tenders") for supply of services as outlined in this section and elsewhere in the RFP.

7. Tender Eligibility

7.1 Eligible Tenderer is a Tenderer who is an authorized service provider by the principal.

7.2 has a registered office in Pakistan;

7.3 has required relevant experience

7.4 is manufacture of Goods / provider of Services or authorized dealer / agent of original manufacturer of Goods / provider of Services.

7.5 Conforms to the clause of "Responsiveness of Bid" given herein this tender document.

7.6 Goods and Services can only be supplied / sources / routed from "origin" in "eligible" member countries.

a. Eligible" is defined as any country or region that is allowed to do business in Pakistan by the law of Government of Pakistan.

b. "origin" shall be considered to be the place where the Goods are produced or from which the Services are provided. Goods are produced when, through manufacturing, processing or substantial and major assembling of components, a commercially recognized product results that is substantially different in basic characteristics or in purpose or utility from its components.

7.7 Bidder should be registered with Pakistan Engineering Council (PEC) in category C-5 or above with specialization code of ME-01.

8. Tender Cost

The Tenderer shall bear all costs / expenses associated with the preparation and submission of the Tender(s) and the Purchaser shall in no case be responsible / liable for those costs / expenses.

9. Joint Venture / Consortium :

Joint venture or partnership firms are **ALLOWED / eligible (Maximum of TWO Companies)** for this tender. Only those companies which are validly registered with sales tax and income tax departments and having sound financial strengths can participate.

Bids submitted by a consortium of two companies or partners (maximum) shall comply with the following requirements:

I. Consortium/Local partner shall have credibility and shall provide references in financial strengths.

II. The Bid, and in case of successful Bid, the Contract form, shall be signed by all so as to be legally binding on all the partners.

III. One of the partners shall be authorized to be lead partner; and this authority shall be evidenced by submitting a power of attorney signed by legally authorized signatories of all the partners.

IV. The partner Lead Partner shall be authorized to incur liabilities, receive payments and receive instructions for and on behalf of any or all partners of the consortium.

V. A copy of the agreement entered into by the consortium partners shall be submitted with the Bid

10. Examination of the Tender Document

The Tenderer is expected to examine the Tender Document, including all instructions and terms and conditions.

11. Clarification of the Tender Document

The Tenderer may require further information or clarification of the Tender Document, within 05 working days of issuance of tender in writing.

12. Amendment of the Tender Document

12.7 The Purchaser may, at any time prior to the deadline for submission of the Tender, at its own initiative or in response to a clarification requested by the Bidder(s), amend the Tender Document, on any account, for any reason. All amendment(s) shall be part of the Tender Document and binding on the Bidder(s).

12.8 The Purchaser shall notify the amendment(s) in writing to the prospective Tenderers.

12.9 The Purchaser may, at its exclusive discretion, amend the Tender Document to extend the deadline for the submission of the Tender, in which case all rights and obligations of the Purchaser and the Tenderers previously subject to the deadline shall thereafter be subject to the deadline as extended.

13. Preparation / Submission of Tender

13.7 The Tenderer is allowed to bid for all the services in the same tender and not part of the services.

13.8 The Tenderer is not allowed to bid for partial procurement of services.

13.9 The Tender and all documents relating to the Tender, exchanged between the Tenderer and the Purchaser, shall be in English. Any printed literature furnished by the Tenderer in another language shall be accompanied by an English translation which shall govern for purposes of interpretation of the Tender.

13.10 The Tender shall be filed in / accompanied by the prescribed Forms, Annexes, Schedules, Charts, Drawings, Documents, Brochures, Literature, etc. which shall be typed, completely filled in, stamped and signed by the Tenderer or his Authorized Representative. In case of copies, photocopies may be submitted.

13.11 The Tender shall be in two parts i.e the technical proposal and the financial proposal. Each proposal shall be in two sets i.e the original and the copy. In the event of any discrepancy between the original and the duplicate, the original shall govern.

13.12 The Technical Proposal shall comprise the following, **without quoting the price**:

13.13 Technical Proposal Form

13.13.1 Affidavit and Undertaking (All terms & conditions and qualifications listed anywhere in the RFP have been satisfactorily vetted)

13.13.2 Covering letter duly signed and stamped by authorized representative.

13.13.3 Authorized Certificate / document from the principle / manufacturer.

13.13.4 Evidence of eligibility of the Tenderer and the Services

13.13.5 Evidence of conformity of the Services to the Tender Document

13.13.6 Technical Brochures / Literature

13.13.7 The statement must be signed by the authorized representative of the Bidder

13.13.8 Financial Capacity

13.13.9 Valid Registration Certificate for Income Tax, Sales Tax, NBIA and / or other allied agencies / organizations / regulatory authorities.

13.13.10 Income Tax & Sales Tax Returns for the last two tax years

13.13.11 Power of Attorney, if an authorized representative is appointed

13.14 The Financial Proposal shall comprise the following:

13.14.1 Financial Proposal Form

13.14.2 Price Schedule

13.14.3 Tender Security **(02% of the total estimated amount in shape of CDR/Payorder/Banker's Cheque/Demand Draft)**

13.15 The Tenderer shall seal the Original Technical Proposal in an envelope duly marked as under:

Original Technical Tender for

Tender Name. [Number of Tender]

Category No:

[Name of the Purchaser]

[Address of the Purchaser]

[Name of the Tenderer]

[Address of the Tenderer]

[Phone No. of the Tenderer]

13.16 The Tenderer shall seal the Duplicate Technical Tender in an envelope duly marked as under:

Duplicate Technical Proposal for

Tender Name. [Name of Tender]

Category No:

[Name of the Purchaser]

[Address of the Purchaser]

[Name of the Tenderer]

[Address of the Tenderer]

[Phone No. of the Tenderer]

13.17 The Tenderer shall follow the same process for the Financial Tender.

13.18 The Tenderer shall again seal the sealed envelopes of Original Technical Proposal and the Original Financial Proposal in an outer envelope, duly marking the envelope as under:

Original Tender for

Tender Name. [Name of Tender]

Category No:

Strictly Confidential

Open on [Last Date of submission of the Tender]

[Name of the Purchaser]

[Address of the Purchaser]

[Name of the Tenderer]

[Address of the Tenderer]

[Phone No. of the Tenderer]

13.19 The Tenderer shall again seal the sealed envelopes of Duplicate Technical Proposal and the Duplicate Financial Proposal in an outer envelope, duly marking the envelope as under:

Duplicate Tender for

Tender Name. [Name of Tender]

Category No:

Strictly Confidential

Open on [Last Date of submission of the Tender]

[Name of the Purchaser]

[Address of the Purchaser]

[Name of the Tenderer]

[Address of the Tenderer]

[Phone No. of the Tenderer]

13.20 The Tenderer shall enclose soft copies of the Technical Proposal and the Financial Proposals, including all Forms, Annexes, Schedules, Charts, Drawings, Documents, Brochures, Literature, etc., in the form of MS Word Documents, MS Excel Worksheets and Scanned images, with the hard copies.

13.21 The Tender shall be mailed to reach and dropped in the Tender Box placed at the Reception of the Purchaser's office, during office hours, up to due date and time.

13.22 This is made obligatory to affix authorized signatures with official seal on all original and duplicate (copies) documents, annexures, copies, certificates, brochures, literature, drawings, letters, forms and all relevant documents as part of the bids submitted by the tenderer. Noncompliance with the same will cause disqualification of bid.

14. Tender Price

14.7 The quoted price shall be:

14.7.1 best / final / fixed and valid until completion of all obligations under the Contract i.e not subject to variation / escalation;

14.7.2 on FOR basis including all charges up to the delivery point at various Punjab Government Offices in Punjab (if required);

14.7.3 in Pak Rupees;

14.7.4 inclusive of all taxes, duties, levies, insurance, freight, etc.

14.8 If not specifically mentioned in the Tender(s), it shall be presumed that the quoted price is as per the above requirements.

14.9 Where no prices are entered against any item(s), the price of that item shall be deemed to have been distributed among the prices of other items, and no separate payment shall be made for that item(s).

14.10 Each cost should be identified as installation (one time) or monthly/quarterly/yearly (recurring) support of operation services thereof.

14.11 The price hereby quoted by the Bidders would include all travelling, accommodation, lodging, insurance, other expenses to be borne by the Instructors / Trainers / Mentors.

15. Tender Security

15.7 The Tenderer shall furnish the Tender Security as under:

15.8 As part of financial bid envelope, failing which will cause rejection of bid.

15.8.1 In the form of Demand Draft / Pay Order / Banker's Cheque / Call Deposit Receipt, in the name of the Purchaser;

15.8.2 for a sum equivalent to 2% of the Total estimated Price;

15.8.3 denominated in Pak Rupees;

15.8.4 have a minimum validity period of 120 days from the last date for submission of the Tender or until furnishing of the Performance Security, whichever is later.

15.9 The proceeds of the Tender Security shall be payable to the Purchaser, on the occurrence of any / all of the following conditions:

15.9.1 If the Tenderer withdraws the Tender during the period of the Tender validity specified by the Tenderer on the Tender Form; or

15.9.2 If the Tenderer does not accept the corrections of his Total Tender Price; or

15.9.3 If the Tenderer, having been notified of the acceptance of the Tender by the Purchaser during the period of the Tender validity, fails or refuses to furnish the Performance Security, in accordance with the Tender Document.

15.10 The Tender security shall be returned to the technically unsuccessful Tenderer with unopened/sealed financial bid while the unsuccessful bidders of financial bid opening procedure will be returned the tender security only. The Tender Security shall be returned to the successful Tenderer on furnishing the Performance Security.

16. Tender Validity

The Tender shall have a minimum validity period of 120 days from the last date for submission of the Tender. The Purchaser may solicit the Tenderer's consent to an extension of the validity period of the Tender. The request and the response thereto shall be made in writing. If the Tenderer agrees to extension of validity period of the Tender, the validity period of the Tender security shall also be suitably extended. The Tenderer may refuse extension of validity period of the Tender, without forfeiting the Tender security.

17. Modification / Withdrawal of the Tender

17.7 The Tenderer may, by written notice served on the Purchaser, modify or withdraw the Tender after submission of the Tender, prior to the deadline for submission of the Tender.

17.8 The Tender, withdrawn after the deadline for submission of the Tender and prior to the expiration of the period of the Tender validity, shall result in forfeiture of the Tender Security.

18. Opening of the Tender

18.7 Tenders shall be opened, at the given place, time and date, in the presence of the Tenderer(s) for which they shall ensure their presence without further invitation.

18.8 The Tenderer's name, modifications, withdrawal, security, attendance of the Tenderer and such other details as the Purchaser may, at its exclusive discretion, consider appropriate, shall be announced and recorded.

18.9 No tenderer or its representative will be allowed to keep any digital device (camera, audio recorder, cell phone etc.) during tender opening meeting at given time and location. Non-compliance will cause the rejection of respective bidder.

19. Clarification of the Tender

The Purchaser shall have the right, at his exclusive discretion, to require, in writing, further information or clarification of the Tender, from any or all the Tenderer(s). No change in the price or substance of the Tender shall be sought, offered or permitted except as required to confirm the corrections of arithmetical errors discovered in the Tender. Acceptance of any such correction is sold discretion of the purchaser

20. Determination of Responsiveness of the Bid (Tender)

20.7 The Purchaser shall determine the substantial responsiveness of the Tender to the Tender Document, prior to the Tender evaluation, on the basis of the contents of the Tender itself without recourse to extrinsic evidence. A substantially responsive Tender is one which:

20.7.1 meets the eligibility criteria for the Tenderer for the Services;

20.7.2 meets the Technical Specifications for the Services;

20.7.3 meets the delivery period / point for the Services;

20.7.4 meets the rate and limit of liquidated damages;

20.7.5 offers fixed price quotations for the the Services;

20.7.6 is accompanied by the required Tender Security as part of financial bid envelope;

20.7.7 The original receipt of tender fee submitted, attached with technical bid envelope;

20.7.8 is otherwise complete and generally in order;

20.7.9 Conforms to all terms and conditions of the Tender Document, without material deviation or reservation.

20.8 A material deviation or reservation is one which affects the scope, quality or performance of the Services or limits the Purchaser's rights or the Tenderer's obligations under the Contract.

20.9 The Tender determined as not substantially responsive shall not subsequently be made responsive by the Tenderer by correction or withdrawal of the material deviation or reservation. However, the Purchaser may waive off any minor non-conformity or inconsistency or informality or irregularity in the Tender.

21. Correction of errors / Amendment of Tender

21.7 The Tender shall be checked for any arithmetic errors which shall be rectified, as follows:

21.7.1 if there is a discrepancy between the amount in figures and the amount in words for the Total Tender Price entered in the Tender Form, the amount which tallies with the Total Tender Price entered in the Price Schedule, shall govern.

21.7.2 if there is a discrepancy between the unit rate and the total price entered in the price Schedule, resulting from incorrect multiplication of the unit rate by the quantity, the unit rate as quoted shall govern and the total price shall be corrected, unless there is an obvious and gross misplacement of the decimal point in the unit rate, in which case the total price as quoted shall govern and the unit rate shall be corrected.

21.7.3 if there is a discrepancy in the actual sum of the itemized total prices and the total tender price quoted in the Price Schedule, the actual sum of the itemized total prices shall govern.

21.8 The Tender price as determined after arithmetic corrections shall be termed as the Corrected Total Tender Price which shall be binding upon the Tenderer.

21.9 Adjustment shall be based on corrected Tender Prices. The price determined after making such

adjustments shall be termed as Evaluated Total Tender Price.

21.10 The cost of making good any deficiency resulting from any acceptable, quantifiable variations and deviations from the terms and conditions of the Contract / Technical Specifications, shall be added to the corrected Tender Price for comparison purposes only. No credit shall be given for offering delivery period earlier than the specified period.

21.11 The Tenderer shall state the Tender Price for the payment terms outlined in the Conditions of Contract which will be considered for the evaluation of the Tender. The Tenderer may state alternate payment terms and indicate the reduction in the Tender price offered for such alternative payment terms. The Purchaser may consider the alternative payment terms offered by the Tenderer.

21.12 The Tenderers may offer discounts for items which shall be taken into account in the evaluation of the Tenders so as to determine the Tender offering the lowest evaluated cost for the Purchaser in deciding award(s) for whole tender.

22. Rejection / Acceptance of the Tender

22.1 The Purchaser shall have the right, at his exclusive discretion, to increase the quantity of any or all item(s) without any change in unit prices or other terms and conditions, accept a Tender reject any or all tender(s), cancel / annul the Tendering process at any time prior to award of Contract, without assigning any reason or any obligation to inform the Tenderer of the grounds for the Purchaser's action, and without thereby incurring any liability to the Tenderer and the decision of the Purchaser shall be final.

22.2 The Tender shall be rejected if it is:

22.2.1 substantially non-responsive; or

22.2.2 submitted in other than prescribed forms, annexes, schedules, charts, drawings, documents / by other than specified mode; or

22.2.3 incomplete, un-sealed, un-signed, printed (hand written), partial, conditional, alternative, late; or

22.2.4 subjected to interlineations / cuttings / corrections / erasures / overwriting; or

22.2.5 the Tenderer submits more than one Tenders; or

22.2.6 the Tenderer refuses to accept the corrected Total Tender Price; or

22.2.7 the Tenderer has conflict of interest with the Purchaser; or

22.2.8 the Tenderer tries to influence the Tender evaluation / Contract award; or

22.2.9 the Tenderer engages in corrupt or fraudulent practices in competing for the Contract award.

22.3 there is any discrepancy between bidding documents and bidder's proposal i.e. any non-conformity or inconsistency or informality or irregularity in the submitted bid.

22.4 the Tenderer submits any financial conditions as part of its bid which are not in conformity with tender document.

23. Acceptance Letter (Letter of Intent)

The Purchaser shall, send the Acceptance Letter (Letter of Intent) to the successful Tenderer, prior to the expiry of the validity period of the Tender, which shall constitute a contract, until execution of the formal Contract.

24. Performance Security

24.1 The successful Tenderer shall furnish Performance Security as under:

24.1.1 within 10 (Ten) working days of the receipt of the Acceptance Letter from the Purchaser;

24.1.2 in the form of a Bank Guarantee, issued by a scheduled bank operating in Pakistan, as per the format provided in the Tender Document or in another form acceptable to the Purchaser;

24.1.3 for a sum equivalent to 10% of the contract value;

24.1.4 denominated in Pak Rupees;
24.1.5 have a minimum validity period of one year from the date of Award Notification.
24.2 The proceeds of the Performance Security shall be payable to the Purchaser, on occurrence of any / all of the following conditions:
24.2.1 If the Contractor commits a default under the Contract;
24.2.2 If the Contractor fails to fulfill any of the obligations under the Contract;
24.2.3 If the Contractor violates any of the terms and conditions of the Contract.
24.3 The Contractor shall cause the validity period of the performance security to be extended for such period(s) as the contract performance may be extended. The Performance Security shall be returned to the Tenderer within thirty working days after the expiry of its validity on written request from the Contractor.

Contract Title:

Contract for

Service Level Agreement (SLA) for

Operations and Maintenance of HVAC & BMS

between

Punjab Forensic Science Agency (PFSA)

and

[name of Contractor]

Dated:

I. Agreement

This CONTRACT AGREEMENT (this "Contract") made as of the **[day]** of **[month]**, **[year]**, between **[full legal name of the Purchaser]** (the "Purchaser"), on the one part,

and

[full legal name of Contractor], on the other part severally liable to the Purchaser for all of the Contractor's obligations under this Contract and is deemed to be included in any reference to the term "Contractor."

RECITALS

WHEREAS,

(a) The Government through the Purchaser intends to spend a part of its budget / funds for making eligible payments under this contract. Payments made under this contract will be subject, in all respects, to the terms and conditions of the Contract in lieu of the consulting services as described in the contract.

(b) The Purchaser has requested the Contractor to provide certain services as described in Tender Document; and

(c) The Contractor, having represented to the Purchaser that it has the required professional skills, and personnel and technical resources, has agreed to provide such services on the terms and conditions set forth in this Contract.

NOW THEREFORE, the Parties to this Contract agree as follows:

1. The Contractor hereby covenants with the Purchaser to supply the Services and provide the Services, in conformity in all respects with the provisions of the Contract, in consideration of the payments to be made by the Purchaser to the Contractor.

2. The Purchaser hereby covenants with the Contractor to pay the Contractor, the Contract Price or such other sum as may become payable, at the times and in the manner, in conformity in all respects with the provisions of the Contract, in consideration of supply of the Services.

3. The following shall be deemed to form and be read and construct as part of this Contract:

   a. The Tender Document
   b. Bidder's Proposal
   c. Terms and Conditions of the Contract
   d. Special Stipulations
   e. The Technical Specifications
   f. Tender Form
   g. Price Schedule
   h. Affidavit(s)

i. Authorized Dealership / Agency Certificate
j. Performance Security
k. Service Level Agreement (SLA) Scope
l. Non-Disclosure Agreement (if required)
m. Any Standard Clause acceptable for Purchaser

4. This Contract shall prevail over all other documents. In the event of any discrepancy / inconsistency within the Contract, the above Documents shall prevail in the order listed above.

IN WITNESS whereof the Parties hereto have caused this Contract to be executed in accordance with the laws of **Pakistan** as of the day, month and year first indicated above.

For **[full legal name of the Purchaser]:**	For **[full legal name of the Contractor]:**
Signature	Signature
Name	Name
Witnessed By:	Witnessed By:

WITNESSES

Signature _____	Signature _____
CNIC # _____	CNIC # _____
Name _____	Name _____
Designation_____	Designation _____
Address _____	Address _____

General Conditions of Contract

25. Contract

The Purchaser shall, after receipt of the Performance Security from the successful Tenderer, send the Contract provided in the Tender Document, to the successful Tenderer. Within three working days of the receipt of such Contract, the Tenderer shall sign and date the Contract and return it to the Purchaser.

26. Contract Documents and Information

The Contractor shall not, without the Purchaser's prior written consent, make use of the Contract, or any provision thereof, or any document(s), specifications, drawing(s), pattern(s), sample(s) or information furnished by or on behalf of the Purchaser in connection therewith, except for purposes of performing the Contract or disclose the same to any person other than a person employed by the Contractor in the performance of the Contract. Disclosure to any such employed person shall be made in confidence and shall extend only as far as may be necessary for purposes of such performance.

27. Contract Language

The Contract and all documents relating to the Contract, exchanged between the Contractor and the Purchaser, shall be in English. The Contractor shall bear all costs of translation to English and all risks of the accuracy of such translation.

28. Standards

The Services provided under this Contract shall conform to the authoritative latest industry standards.

29. Patent Right

The Contractor shall indemnify and hold the Purchaser harmless against all third party claims of infringement of patent, trademark or industrial design rights arising from use of the Service or any part thereof.

30. Execution / Work Schedule

The Contractor shall submit an Execution Schedule, giving details of services rendered, as required under the Contract, to the Client, within three days of the signing of the Contract.

31. Payment

31.1 The Contractor shall submit an Application for Payment, in the prescribed form, to the Client. The Application for Payment shall: be accompanied by such invoices, receipts or other documentary evidence as the Client may require; state the amount claimed; and set forth in detail, in the order of the Price Schedule, particulars of the Services provided, up to the date of the Application for Payment and subsequent to the period covered by the last preceding Certificate of Payment, if any.

31.2 The Contractor will submit certificate along with Application for Payment that all just and lawful bills for labour, materials and equipment used in the performance of works/ services have been paid in full.

31.3 The Purchaser shall pay the amount verified in the Certificate of Payment within twenty one (21) days of receipt of a Certificate of Payment. Payment shall not be made in advance. The Purchaser shall make payment for the Services provided, to the Contractor, as per Government policy, in Pak Rupees, through treasury cheque.

32. Price

The Contractor shall not charge prices for the Services provided and for other obligations discharged, under the Contract, varying from the prices quoted by the Contractor in the Price Schedule.

33. Stamp Papers for the contract Signing

As per Section 22(A)(b) of Schedule –I, Stamp Act 1899 read with Finance Act 1995(Act-IV of 1995) Government of the Punjab, The Contractor shall provide 'stamp papers/Stamp Duty' worth of 0.25% of the total contract/Purchase Order Value for the signing of Contract to the PFSA.

34. Contract Amendment

34.1 The Purchaser may, at any time, by written notice served to the Contractor, alter, amend, omit, increase or otherwise change the nature, quality, quantity and scope, of all / any of the Services / the Works, in whole or in part.

34.2 The Contractor shall, within ten working days of receipt of such notice, submit a cost estimate and execution schedule of the proposed change (hereinafter referred to as the Change), to the Purchaser.

34.3 The Contractor shall not execute the Change until and unless the Purchaser has allowed the said Change, by written order served on the Contractor with a copy to the Client.

34.4 The Change, mutually agreed upon, shall constitute part of the obligations under this Contract, and the provisions of the Contract shall apply to the said Change.

34.5 No variation in or modification in the Contract shall be made, except by written amendment signed by both the Purchaser and the Contractor.

35. Assignment / Subcontract

35.1 The Contractor shall not assign or sub-contract its obligations under the Contract, in whole or in part, except with the Purchaser's prior written consent.

35.2 The Contractor shall guarantee that any and all assignees / subcontractors of the Contractor shall, for performance of any part / whole of the work under the contract, comply fully with the terms and conditions of the Contract applicable to such part / whole of the work under the contract.

36. Extensions in time for performance of obligations under the Contract

If the Contractor encounters conditions impeding timely performance of any of the obligations, under the Contract, at any time, the Contractor shall, by written notice served to the Purchaser promptly indicate the facts of the delay, its likely duration and its cause(s). As soon as practicable after receipt of such notice, the Purchaser shall evaluate the situation and may, at its exclusive discretion, without prejudice to any other remedy it may have, by written order served on the Contractor with a copy to the Client, extend the Contractor's time for performance of its obligations under the Contract.

37. Liquidated Damages

If the Contractor fails / delays in performance of any of the obligations, under the Contract / violates any of the provisions of the Contract / commits breach of any of the terms and conditions of the Contract the Purchaser may, without prejudice to any other right of action / remedy it may have, deduct from the Contract Price, as liquidated damages, a sum of money @1% of the Contract Price which is attributable to such part of the Services / the Works as cannot, in consequence of the failure / delay, be put to the intended use, for every day between the scheduled delivery date(s), with any extension of time thereof granted by the Purchaser, and the actual delivery date(s). Provided that the amount so deducted shall not exceed, in the aggregate, 10% of the Contract Price.

38. Blacklisting

38.1 If the Contractor fails / delays in performance of any of the obligations, under the Contract / violates any of the provisions of the Contract / commits breach of any of the terms and conditions of the Contract the Purchaser may, at any time, without prejudice to any other right of action / remedy it may have, blacklist the Contractor, either indefinitely or for a stated period, for future

tenders in public sector.

38.2 If the Contractor is found to have engaged in corrupt or fraudulent practices in competing for the award of contract or during the execution of the contract, the Purchaser may, at any time, without prejudice to any other right of action / remedy it may have, blacklist the Contractor, either indefinitely or for a stated period, for future tenders in public sector.

39. Forfeiture of Performance Security

If the Contractor fails / delays in performance of any of the obligations, under the Contract / violates any of the provisions of the Contract / commits breach of any of the terms and conditions of the Contract the Purchaser may, without prejudice to any other right of action / remedy it may have, forfeit Performance Security of the Contractor.

Failure to supply required items/services within the specified time period will invoke penalty as specified in this document. In addition to that, Performance Security amount will be forfeited and the company will not be allowed to participate in future tenders as well.

40. Termination for Default

40.1 If the Contractor fails / delays in performance of any of the obligations, under the Contract / violates any of the provisions of the Contract / commits breach of any of the terms and conditions of the Contract the Purchaser may, at any time, without prejudice to any other right of action / remedy it may have, by written notice served on the Contractor indicate the nature of the default(s) and terminate the Contract, in whole or in part, without any compensation to the Contractor. Provided that the termination of the Contract shall be resorted to only if the Contractor does not cure its failure / delay, within fifteen working days (or such longer period as the Client may allow in writing), after receipt of such notice.

40.2 If the Purchaser terminates the Contract for default of the Contractor, in whole or part of works, the Purchaser may procure, Services / Works, similar to those undelivered in a reasonable manner, and any excess costs will be deducted from due payment from Contractor's bills. . However, the Contractor shall continue performance of the Contract to the extent not terminated.

41. Termination for Insolvency

If the Contractor becomes bankrupt or otherwise insolvent, the Purchaser may, at any time, without prejudice to any other right of action / remedy it may have, by written notice served on the Contractor with a copy to the Client, indicate the nature of the insolvency and terminate the Contract, in whole or in part, without any compensation to the Contractor.

42. Termination for Convenience

42.1 The Purchaser may, at any time, by written notice served on the Contractor, terminate the Contract, in whole or in part, for its convenience, without any compensation to the Contractor.

42.2 The Services which are complete or to be completed by the Contractor, within thirty working days after the receipt of such notice, shall be accepted by the Purchaser. For the remaining services, the Purchaser may elect:

42.2.1 to have any portion thereof completed and delivered; and/or

42.2.2 to cancel the remainder and pay to the Contractor an agreed amount for partially completed Services or Works previously procured by the Contractor for the purpose of the Contract, together with a reasonable allowance for overhead & profit.

43. Force Majeure

43.1 The Contractor shall not be liable for liquidated damages, forfeiture of its Performance Security, blacklisting for future tenders, termination for default, if and to the extent his failure / delay in performance /discharge of obligations under the Contract is the result of an event of Force Majeure.

43.2 If a Force Majeure situation arises, the Contractor shall, by written notice served on the Purchaser with a copy to the Client, indicate such condition and the cause thereof. Unless otherwise directed by the Purchaser in writing, the Contractor shall continue to perform 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.

44. Dispute Resolution

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

44.2 If, after thirty working days, from the commencement of such informal negotiations, the Purchaser and the Contractor have been unable to amicably resolve a Contract dispute, either party may, require that the dispute be referred for resolution by arbitration under the Pakistan Arbitration Act, 1940, as amended, by one or more arbitrators selected in accordance with said Law. The place for arbitration shall be Lahore, Pakistan. The award shall be final and binding on the parties.

45. Statutes and Regulations

45.1 The Contract shall be governed by and interpreted in accordance with the laws of Pakistan.

45.2 The Contractor shall, in all matters arising in the performance of the Contract, conform, in all respects, with the provisions of all Central, Provincial and Local Laws, Statutes, Regulations and By-Laws in force in Pakistan, and shall give all notices and pay all fees required to be given or paid and shall keep the Purchaser indemnified against all penalties and liability of any kind for breach of any of the same.

45.3 The Courts at Lahore shall have the exclusive territorial jurisdiction in respect of any dispute or difference of any kind arising out of or in connection with the Contract.

46. Taxes and Duties

The Contractor shall be entirely responsible for all taxes, duties and other such levies imposed make inquiries on income tax / sales tax to the concerned authorities of Income Tax and Sales Tax Department, Government of Pakistan.

47. Contract Cost

The Contractor shall bear all costs / expenses associated with the preparation of the Contract and the Purchaser shall in no case be responsible / liable for those costs / expenses.

48. The Client

48.1 The Client shall only carry out such duties and exercise such authority as specified in the Contract. The Client shall have no authority to relieve the Contractor of any of his obligations under the Contract, except as expressly stated in the Contract.

48.2 The Contractor shall proceed with the decisions, instructions or approvals given by the Client in accordance with these Conditions.

48.3 The Client shall conform with all the relevant clauses of this Tender Document to carry out all responsibilities assigned thereto in a timely manner.

49. Authorized Representative

49.1 The Purchaser, the Client or the Contractor may, at their exclusive discretion, appoint their Authorized Representative and may, from time to time, delegate any / all of the duties / authority, vested in them, to their authorized Representative(s), including but not limited to, signing on their behalf to legally bind them, and may, at any time, revoke such delegation.

49.2 The Authorized Representative shall only carry out such duties and exercise such authority as may be delegated to him, by the Purchaser, the Client or the Contractor.

49.3 Any such delegation or revocation shall be in writing and shall not take effect until notified to the other parties to the Contract.

49.4 Any decision, instruction or approval given by the Authorized Representative, in accordance with such delegation, shall have the same effect as though it had been given by the Principal.

49.5 Notwithstanding any failure of the Authorized Representative to disapprove Services or Works shall not prejudice the right of the Client to disapprove such Services or Works and to give instructions for the rectification thereof.

49.6 If the Contractor questions any decision or instruction of the Authorized Representative of the Purchaser / the Client, the Contractor may refer the matter to the Purchaser / the Client who shall confirm, reverse or vary such decision or instruction.

50. Waiver

Failure of either party to insist upon strict performance of the obligations of the other party, under the Contract, shall in no way be deemed or construed to affect in any way the right of that party to require such performance.

51. Training

51.1 The Contractor shall arrange and undertake a comprehensive training program for the staff nominated by the Purchaser / the Client to ensure that they shall acquire a good working knowledge of the operation, and general maintenance of the Services to be supplied under the Contract.

51.2 In case of non-compliance with instructions, non-cooperation or other difficulties experienced by the Contractor with regard to any of these personnel, the Contractor shall apprise the Purchaser / Client and proceed to implement suitable remedial measures after consultation with them.

Special Stipulations

SCHEDULE-A, SPECIAL STIPULATIONS	
For ease of Reference, certain special stipulations are as under:	
Tender Security	The Contractor shall furnish the Tender Security as under: for the whole Tender; in the form of Demand Draft / Pay Order / Call Deposit Receipt, in the name of the Purchaser; for a sum equivalent to 2% of the Total estimated Price; denominated in Pak Rupees; Have a minimum validity period of 120 days from the last date for submission of the Tender or until furnishing of the Performance Security, whichever is later
Performance Security	The successful Contractor shall furnish Performance Security as under: in the form of a Bank Guarantee, issued by a scheduled bank operating in Pakistan, as per the format provided in the Tender Document or in another form acceptable to the Purchaser; for a sum equivalent to 10% of the contract value; denominated in Pak Rupees; Have a minimum validity period of one year from the date of Award Notification
(delivery Period)Start operation of Services after installation, configuration, deployment, commissioning, testing, and training	Immediately from the issuance of acceptance letter.
Liquidated damages for failure / configuration of Services by the Contractor	Liquidated damages shall be levied @ 1% of the Contract Price which is attributable to such part of the Services as cannot, in consequence of the failure / delay, be put to the intended use, for every day between the scheduled delivery date(s), with any extension of time thereof granted by the Purchaser, and the actual delivery date(s). Provided that the amount so deducted shall not exceed, in the aggregate, 10% of the Contract Price. (This penalty will also be invoked on the commitments given by the Contractor in the technical proposal)
Legal Status to Work in Pakistan	The Bidder must be allowed and meet all conditions set forth by the Government of Punjab and Government of Pakistan to work with all concerned parties of the private, public, and not for profit sectors.

SCOPE / SLA: HVAC & BMS

Technical Proposal

REQUIREMENTS OF TECHNICAL PROPOSAL:

All the bidders submitting their bids against this bid must submit the qualification application along with the information in the following formats together with the relevant documentation:

1. Market Presence:

   - Firm name, its status, address, telephone number(s), fax number, email address.
   - Copy of Income Tax Return for last 02-Years.
   - Copy of Firm's GST Number Certificate
   - Copy of Firm's National Tax Number Certificate
   - Copy of Firm's Punjab Revenue Authority Certificate
   - Copy of Professional Tax Certificate for the Year 2023-24
   - Copy of N.I.C. of Firm's Authorized Representative
   - Copy of letter of intent to form JV (Joint Venture) or JV agreement (In case of JV Only).
   - Details of offices / branches operated nationwide.

2. Financial Soundness:

   - Financial soundness bank statement /Certificates for financial year (01-07-2022 to 30-06-2023)

3. Working Experience of new Installations :

   - Experience/List of projects where setup / installation of HVAC Equipment E.g. chillers, AHU, Cooling towers etc large size projects
   - List of similar nature Successful completion or In-hand Projects with capacity of project.

4. Quality Assurance & Heath, Safety, Environment Policies & Procedures:

   - Submission of Comprehensive Quality, Heath, Safety & Environment Policies & Procedures.
   - Submission of Proposed Methodology, Approach & Organogram for the Project.

5. Daily / Weekly / Monthly Performance Report formats:

   - Submission of Comprehensive Performance Report Formats Required
   - Submission of Data Analysis Formats Required etc

6. Working Experience of Operation and Maintenance :

   - Experience/List of projects where operations and maintenance (SLA) of HVAC Equipment E.g. chillers, AHU, Cooling towers etc and related equipment

- List of similar nature Successful completion or In-hand Projects.

7. Key Professionals staff and proposed staff to purchaser for SLA:

   - List of Key Personnel including :
     - Engineers
     - Managers
     - Supervisors
     - Other support staff

8. Experience of installation and maintenance of BMS system for HVAC equipment

   Experience of installation or operation & maintenance of BMS system for HVAC equipment

9. **Affidavit to the effect that the firm is not blacklisted and is not in litigation with any organization / department, private or public.**

Evaluation Criteria:

Each Technical Proposal will be evaluated according to the Criteria given below.

Technical Evaluation Criteria for Service Level Agreement (SLA), Operations, Maintenance of HVAC & BMS at Punjab Forensic Science Agency (PFSA) Lahore

(To Qualify Minimum 70 Points)

Name of the Firm								
	01 Market Presence And Establishment of the Company in Related Area (**Mandatory**)	02 Financial Soundness	03 Experience/ List of projects where **new installations** of HVAC Equipment E.g. chillers, AHU, Cooling towers etc. (Proof required)	04 Quality, Health, Safety & Environment Policies & Procedures	05 Daily/ Weekly/monthly Maintenance Plans and reports formats to the purchaser	06 Experience/ List of projects where **operation and maintenance** of HVAC Equipment E.g. chillers, AHU, Cooling towers etc. (Proof require)	07 Company's Total Staff and Proposed Staff to Purchaser for SLA O & M	08 Experience of installation or operation & maintenance of **BMS** system for HVAC equipment
	Max 10 Points	Max 10 Points	Max 20 Points	Max 10 Points	Max 10 Points	Max 20 Points	Max 10 Points	Max 10 Points
Points Obtained (To be filled by the Employer)								

<table>
<tr><th colspan="3">Technical Proposal – Weight age Point Rating Basis</th></tr>
<tr><td>01.</td><td>Market Presence</td><td><table><tr><td>5 Years</td><td>6 Years</td><td>7 Years</td><td>8 Years</td><td>9 Years</td><td>10 Years</td></tr><tr><td>5 Points</td><td>6 Points</td><td>7 Points</td><td>8 Points</td><td>9 Points</td><td>10 Points</td></tr></table>
Market Presence less than 05 will be marked as zero. Minimum 5 points is mandatory to qualify this mandatory point.</td></tr>
<tr><td>02.</td><td>Financial Soundness</td><td>01-Point for each 2.0 Million revenue generated bank statement (Credit Transaction) during last Financial (01-07-2022 to 30-06-2023).</td></tr>
<tr><td>03.</td><td>Experience/List of projects where new installations of HVAC Equipment
E.g. chillers, AHU, Cooling towers etc.</td><td>05- Point for each contract /PO;</td></tr>
<tr><td>04.</td><td>Quality, Health, Safety & Environment Policies & Procedures</td><td>10 Points for comprehensive Policies and Procedures, Methodology, Approach & Organogram</td></tr>
<tr><td>05.</td><td>Daily / Weekly/Monthly Maintenance plans</td><td>10 Points for Report formats to purchaser.</td></tr>
<tr><td>06.</td><td>Experience/List of projects where operation and maintenance of HVAC Equipment
E.g. chillers, AHU, Cooling towers etc.</td><td>05- Point for each contract /PO;</td></tr>
<tr><td>07.</td><td>Company’s Total Staff and Proposed Staff for services to Purchaser for SLA</td><td>10 Points for Proposed staff for support for 24/7, 365 days and level of staff experience and education
Proposed staff to purchaser for SLA support (detail as mentioned on Page-32 of tender document must be followed)</td></tr>
<tr><td>08.</td><td>Experience of installation or operation & maintenance of BMS system for HVAC equipment</td><td>05- Point for each contract /PO;</td></tr>
</table>

- **Note :**
  Only the technically qualified bidder on the basis of criteria above shall be eligible for opening of their financial bid.

Financial Proposal

FORM OF BID SUBMISSION:

Director General,
Punjab Forensic Science Agency,
Home Department
Government of Punjab,
Thokar Niaz Baig,
Lahore.

Subject: **Service Level Agreement (SLA) for Service Level Agreement (SLA) for Operations and Maintenance of HVAC & BMS of Punjab Forensic Science Agency (PFSA), Lahore**

(Bidders are requested to fill in the blank spaces in this form of Bid).

Dear Sir,

1. Having inspected site and checked all local conditions affecting the works and having also examined all Bid documents including the instructions to bidders, General Conditions of Contract and Scope of Services, we the undersigned offer to provide services / systems in conformity with the Bid documents including Instructions to Bidder, General Conditions of Contract and Scope of Services for the total sums as specified in Financial Quotation agreed upon under the contract.

2. We accept the above Bid documents as valid and binding including those parts not countersigned in fully by us.

3. We confirm that we have satisfied ourselves about the site, services, climate, traffic and all other conditions which influence or may influence the works, and we do not require any clarification and additional information thereto and that we cannot raise any claim for not knowing them.

4. We undertake to carry out such alterations, additions or curtailments of the works as may from time to time be determined and ordered in writing by the employer in accordance with the contract.

5. The rates and prices which we have quoted and all information and data attached with our Bid are complete and without any hidden technical or financial reservations or implications. They have been duly checked and are correct in every aspect.

6. The rates and prices entered in the Bid (wages of manpower) are firm and are inclusive of all cost of manpower, labor, equipment, custom duties, sales tax, surcharges, local & federal taxes, insurances, royalties, overhead and profit and all other direct and indirect costs related to and connected with the satisfactory execution of services.

7. We undertake if our Bid is accepted to sign the Agreement of Contract within fourteen (14) working days of the issue of the Letter of Award.

8. If our Bid is accepted we will furnish a Performance Bond from a scheduled bank or insurance company approved by the employer for the amount 10% of the bid amount.

9. We agree to pay all costs towards the preparation of the Agreement of Contract.

10. We further agree to abide by this Bid for a period of 120 calendar days from the date of opening of the Bid and it shall remain binding upon us for this period.

11. Unless and until a formal agreement is prepared and signed, the Bid documents together with your written acceptance thereof shall constitute a binding contract between us.

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

Dated: This _____day of _____, 20_____

Signature of the bidder _____

Duly authorized to sign the Bid on behalf of:

_____
Name of bidder in block letter

_____
Designation of the bidder:

_____
_____
Address:

In presence of:

_____
Name of witness:

_____
Designation of the witness:

_____
_____
Address:

Financial Proposal

FORM OF BID REQUIREMENTS:

	Subject	Provision
1.	Amount of Earnest Money in the form of Pay Order / Bank Guarantee / Insurance Guarantee.	02% of the estimated price in favor of Director General, Punjab Forensic Science Agency
2.	Performance Bond	
	a. Amount: _____	10% (Ten Percent) of the bid amount at the time of signing of the contract.
	b. Validity Period of performance bond.	Till end of Contract Period.
3.	Surety for the proposed Performance Bond (state the name and address of the proposed scheduled bank from whom Performance Bond shall be obtained).	Any Scheduled Bank
4.	Insurances	
5.	Venue of arbitration	Punjab Forensic Science Agency, Lahore
6.	Facility Manager's address for serving of notices	_____ _____
7.	Employer's address for serving of notices	Director General, Punjab Forensic Science Agency, Home Department Government of Punjab, Thokar Niaz Baig, Lahore.

_____

(Signature of bidder
& Company Seal)

Financial Proposal

3.3. FINANCIAL QUOTATION:

For the services rendered under the scope of services, the Service Level Agreement shall be paid as under:

Monthly Service Charges

A.	----------	Rs. _____
B.	----------	Rs_____
C.	----------	Rs. _____

Grand Total Monthly remuneration of **Rs. _ _ _ _ _ _ _ _ _ _ _ _ _/-**

(Pak Rupees_____

_____Only)

Authorized Signature _____

Name _____

Company Official Seal _____

Date _____

Financial Proposal

3.1.1 RESIDENT SUPPORTING STAFF PLAN FOR 24/7 HOURS 365 DAYS AT PFSA BUILDING

Sr#	Tech. Staff Req.	Post	Shift	Qualification	Experience
1	Site Incharge / Supervisor	1	A	Graduate / B. Tech (HVAC/Mechanical/Electrical)	3-5 Years' experience in relevant field
2	BMS Engineer	1		Graduate / B. Tech (HVAC/Mechanical/Electrical)	3-5 Years' experience in relevant field
3	Support Engineer / Foreman	1		DAE / Equivalent (HVAC/Mechanical/Electrical)	5-8 Years' experience in relevant field
4	Support Staff / Technician	2		DAE/Matric/Certificate (HVAC/Electrical/Mechanical)	3-5 Years' experience in relevant field
5	Helper	1		Matric/Middle	3-5 Years' experience in relevant field
6	Support Staff / Technician	2	B	DAE / Matric / Certificate (HVAC/Electrical/Mechanical)	3-5 Years' experience in relevant field
7	Support Staff / Technician	2	C	DAE / Matric / Certificate (HVAC/Electrical/Mechanical)	3-5 Years' experience in relevant field

-Dedicated Staff with necessary tools available at PFSA building for 24/7 365 days support to Purchaser;

- Vendor may proposed increase or same, Vendor may propose own staff to PFSA based on required services and support

Scope Of Work

1- The total time of Service Level Agreement contract will minimum up to 30th June, 2024 from the date of award AND may extend on monthly basis after 30th June, 2024.
2- The payment will be made on Monthly basis and will be made within 10 days from the date of monthly invoice;
3- The Purchaser have full rights to Terminate the contract / agreement anytime time with or without any reason by given prior 01-month written notice.
4- Complete available equipment list along with model, manufacturer, quantity and technical details are given for your reference.
5- The Contractor will be deemed to satisfy himself about scope of the work as per the list attached with this document. A site visit may be arranged in co-ordination with contact persons before submission of tenders.
6- The purchaser will provide access to the authorized staff deputed by the Contractor for performance of his obligations to all the equipment for operations and maintenance at the time of signoff contract in working condition;
7- The parts for the maintenance are not inclusive in the SLA contract and all the required parts for SLA and maintenance will be provided by the PFSA as per requirements and procedures.
8- For chilling in building, the bidder will fulfill the Operation & Maintenance requirement with trained Engineers.
9- Visit of a Senior Technical Supervisor to evaluate the performance of HVAC Equipment on monthly basis and Annual Maintenance at the start of winter season from the authorized agent of Chillers installed at PFSA will be the responsibility of Contractor.
10- The complete services of annual maintenance of complete HVAC system every year without any additional cost by the suitable/certified/qualified staff and necessary special tools (Parts not included).
11- Availability of a suitable expert mechanic on daily basis during working hours to look after the plant and rectify fault in case of breakdown.
12- Organization Chart indicating head office & field office personnel involved in Management, Supervision and Engineering of the works to be done and services to be performed under the Contract.
13- If replacement of parts will be required PFSA will provide parts and Contractor will reinstall these parts.

-Maintenance

Vendor will provide comprehensive maintenance services for supported machines. Comprehensive maintenance per year will typically be performed on each supported machine, and minor maintenance may be performed more frequently. Operations that may be performed as part of maintenance. A full maintenance will typically require, depending on what tasks need to be performed. Periodic Maintenance is always scheduled in advance.

-Troubleshooting

Vendor will troubleshoot problems with supported operating systems, diagnostic, required tools. Vendor will also perform basic hardware troubleshooting.

-Training

Vendor provides trained resources to support PFSA users. Vendor's staff can evaluate training needs for supported users and provide specific recommendations for training classes or materials.

-via Service Desk support

To request support services the User send electronic mail to the appropriate support team's service desk email address XXXXXXX@xxxxxxx.xxx In cases in which email is not operational, user may call the Service Desk at XXX-XXXXXXX / XXX-XXXXXXX.

Response time

Vendor's goal is to respond to all requests for service as quickly as possible. Vendor prioritizes requests as they come in using the following general guidelines:

Vendor's normal response times for request shown in the table below:

Category	Initial response time	Commencement of work
Urgent	0-90 minutes	0-2 hours
Normal /	1 – 2 hours	0-4 hours
Planned	2-4 hours	As scheduled

Penalty Implications and clauses:

The vendor will be responsible to an overall uptime of 95 percent+. The purchaser will deduct up to 10 percent service contract /PO amount, if agreed uptime is not met. Availability excludes the annual maintenance agreed upon maintenance time and takes into account any manufacturer's response time for equipment delivery. Any delays or downtime due to non-availability of Parts (responsibility of purchaser to be provided to the Vendor) will not count into downtime Percentage and will be counted into Purchaser account. However, Vendor is responsible to inform Purchaser for the requirements of parts well before time to make possible availability of parts on time.

Reporting

Uptime reporting on all systems will be provided to the purchaser on monthly basis duly signed by authorized representative of the purchaser. Root cause for any outage will be provided to the Purchaser along with monthly reports. The Vendor monitoring system will be used to monitor all/mostly devices and produce the uptime report. If the Vendor is not able to maintain 95 percent availability, up to 10 percent amount will be deducted from the invoice or any other monies due to the Contractor. These deductions will be applied on the invoice subsequent to the monthly uptime analysis.

Scheduled Maintenance Times

During scheduled maintenance the equipment and related services may be unavailable. Any unscheduled maintenance will be communicated to and agreed upon with the Purchaser at least 24-48 hours prior to the event. Any service affecting maintenance beyond the Vendor's control will not count against the uptime commitment for the Purchaser

Annexure-A

Technical Proposal Submission Form

[Location, Date]

To _(Name and address of Client / Purchaser)_

Dear Sir,

We, the undersigned, offer to provide the _(insert title of assignment)_ in accordance with your Request for Proposal/Tender Document dated _(insert date)_ and our Proposal. We are hereby submitting our Proposal, which includes the Technical Proposal and the Financial Proposal sealed in two separate envelopes.

We undertake, if our Proposal is accepted, to provide supply of _____related to the assignment.

We also confirm that the Government of Pakistan / Punjab has not declared us, or any, ineligible on charges of engaging in corrupt, fraudulent, collusive or coercive practices. We furthermore, pledge not to indulge in such practices in competing for or in executing the Contract, and we are aware of the relevant provisions of the Proposal Document.

We understand you are not bound to accept any Proposal you receive.

We remain,

Yours sincerely,

Authorized Signature

(In full and initials)

Name and Designation of Signatory

Name of Firm

Address

Annexure-C

Financial Proposal Submission Form (Part of Financial Bid Envelope)

[Location, Date]

To _(Name and address of Client / Purchaser)_

Dear Sir,

We, the undersigned, offer to provide the _(Insert title of assignment)_ in accordance with your Request for Proposal dated _(insert date)_ and our Technical Proposal. Our attached Financial Proposal is for the sum of _(insert amount in words and figures)_. This amount is inclusive of all taxes.

Our Financial Proposal shall be binding upon us subject to the modifications resulting from Contract negotiations, up to expiration of the validity period of the Proposal, i.e. before the date indicated in _____ of the Proposal Data Sheet.

We also declare that the Government of Pakistan / Punjab has not declared us or any Sub-Contractors for any part of the Contract, ineligible on charges of engaging in corrupt, fraudulent, collusive, or coercive practices. We furthermore, pledge not to indulge in such practices in competing for or in executing the Contract, and are aware of the relevant provisions of the Proposal Document.

We understand you are not bound to accept any Proposal you receive.

Signed
In the capacity of:
Duly authorized to sign the proposal on behalf of the Applicant.
Date:

Annexure-D

Format for Covering Letter

To
(Name and address of Purchaser)

Sub: _____.

Dear Sir,

a) Having examined the tender document and Appendixes we, the undersigned, in conformity with the said document, offer to provide the said items on terms of reference to be signed upon the award of contract for the sum indicated as per financial bid.

b) We undertake, if our proposal is accepted, to provide the items/services comprise in the contract within time frame specified, starting from the date of receipt of notification of award from the client Department / Office.

c) We agree to abide by this proposal for the period of ____ days (as per requirement of the project) from the date of bid opening and it shall remain binding upon us and may be accepted at any time before the expiration of that period.

d) We agree to execute a contract in the form to be communicated by the _(insert name of the Purchaser)_, incorporating all agreements with such alterations or additions thereto as may be necessary to adapt such agreement to the circumstances of the standard.

e) Unless and until a formal agreement is prepared and executed this proposal together with your written acceptance thereof shall constitute a binding contract agreement.

f) We understand that you are not bound to accept a lowest or any bid you may receive, not to give any reason for rejection of any bid and that you will not defray any expenses incurred by us in biding.

g) We would like to clearly state that we qualify for this work as our company meets all the pre-F criteria indicated on your tender document. The details are as under:

_____

Authorized Signatures with Official Seal

Annexure-E

INSTRUCTION FOR PREPARATION OF POWER OF ATTORNEY

a) To be executed by an authorized representative of the bidder.

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

c) Also, wherever required, the Bidder should submit for verification the extract of the charter documents and documents such as a resolution/power of attorney in favor of the Person executing this Power of Attorney for the delegation of power hereunder on behalf of the Bidder.

d) In case the Application is signed by an authorized Director / Partner or Proprietor of the Applicant, a certified copy of the appropriate resolution / document conveying such authority may be enclosed in lieu of the Power of Attorney.

Format of Power-of-Attorney

POWER OF ATTORNEY

(On Stamp Paper of relevant value)

Know all men by these presents, we (name of the company and address of the registered office) do hereby appoint and authorize Mr. (full name and residential address) who is presently employed with us and holding the position of as our attorney, to do in our name and on our behalf, all such acts, deeds and things necessary in connection with or incidental to our proposal for (name of the project) in response to the tenders invited by the (name of the Purchaser) including signing and submission of all documents and providing information/responses to (name of the Purchaser) in all matters in connection with our Bid.

We hereby agree to ratify all acts, deeds and things lawfully done by our said attorney pursuant to this Power of Attorney and that all acts, deeds and things done by our aforesaid attorney shall and shall always be deemed to have been done by us.

Dated this _____ day of _____ 20__

For _____

(Signature)

(Name, Designation and Address)

Accepted

(Signature)

(Name, Title and Address of the Attorney)

Date:

Annexure-F

UNDERTAKING

It is certified that the information furnished here in and as per the document submitted is true and correct and nothing has been concealed or tampered with. We have gone through all the conditions of tender and is liable to any punitive action for furnishing false information / documents.

Dated this _____ day of _____ 20__

Signature

(Company Seal)

_____

In the capacity of

Duly authorized to sign bids for and on behalf of:

Annexure-G

AFFIDAVIT

Integrity Pact

We _(Name of the bidder / supplier)_ being the first duly sworn on oath submit, that Mr. / Ms. _____ (if participating through agent / representative) is the agent / representative duly authorized by _(Name of the bidder company)_ hereinafter called the Contractor to submit the attached bid to the _(Name of the Purchaser)_. Affiant further states that the said M/s (Bidding Firm/Company Name) has not paid, given or donate or agreed to pay, given or donate to any line officer or employee of the _(Name of the Purchaser)_ any money or thing of value, either directly or indirectly, for special consideration in the letting of the contract, or for giving undue advantage to any of the bidder in the bidding and in the evaluation and selection of the bidder for contract or for refraining from properly and thoroughly maintaining projects implementations, reporting violation of the contract specification or other forms of non-compliance.

_____
Signature & Stamp

Subscribed and sworn to me this _____ day of _____ 20__

_____ Notary Public

Annexure-H

PERFORMANCE SECURITY

Issuing Authority:
Date of Issuance:
Date of Expiry:
Claim Lodgment Date:

WHEREAS [Name and Address of the Contractor] (hereinafter called "the Contractor") has agreed to supply the Services and render the Services against Tender Name (hereinafter called "the Contract") for the Contract Value of PKR (in figures _____) (in words _____).

AND WHEREAS it has been stipulated in the Tender Document that the successful Contractor shall furnish Performance Security, within seven working days of the receipt of the Acceptance Letter from the Purchaser, in the form of a Bank Guarantee, issued by a scheduled bank operating in Pakistan, as per the format provided in the Tender Document or in another form acceptable to the Purchaser, for a sum equivalent to Rs._____(10% of the contract value) valid from the date of issue until all obligations have been fulfilled in accordance with the Contract;

AND WHEREAS [Name of the Bank] having registered office at [Address of the Bank] (hereinafter called "the Guarantor") has agreed to give the Contractor a Guarantee;

THEREFORE the Guarantor hereby affirms to bind himself, his successors and his assigns to the Purchaser, for the sum of PKR (in figures _____) (in words _____) and undertakes to pay to the Purchaser, upon receipt of his written demand(s), any sum(s) as specified by him, not exceeding the above limit in aggregate, without cavil / argument and without the Purchaser having to substantiate / prove or to show grounds / reasons for such claim(s), on the occurrence of any / all of the following conditions:

1. If the Contractor commits a default under the Contract;
2. If the Contractor fails to fulfill any of the obligations under the Contract;
3. If the Contractor violates any of the provisions of the Contract.

Provided that the Purchaser shall specify the occurred condition(s) owing to which the said sum is due to him.

Provided further that any demand(s) / claim(s) from the Purchaser shall reach the Guarantor within thirty working days after the expiry of the Guarantee.

This guarantee shall remain valid up to _____ or until expiry of warranties or all obligations have been fulfilled in accordance with the Contract, whichever is later.

Date this _____day of 20_____.

GUARANTOR

Signature _____
CNIC # _____
Name _____
Designation _____
Address _____

EQUIPMENT DETAIL

	Equipment	QTY NO'S	CAPACITY	MODEL NUMBER	Make
	CHILLERS				
1	Chiller No 1	01	Cooling capacity 405 USRT Heating capacity 1139. 1000kcal/hr	LDF-S045SD	LS MTRON
2	Chiller No 2	01	Cooling capacity 405 USRT Heating capacity 1139. 1000kcal/hr	LDF-S045SD	LS MTRON
3	Chiller No 3	01	Cooling capacity 405 USRT Heating capacity 1139. 1000kcal/hr	LDF-S045SD	LS MTRON
4	Air Cooled Chiller	01	47 TON	CGAM-070EJC02B4B (TYPE 368192-2)	TRANE FRANCE
	Hot Water Generator				
5	Hot Water Generator	01	NOMINAL THERMAL CAPACITY 455KW FURNANCE CAPACITY 477 KW	Press-T3S Superac 450 AR (0085BS0230 pin code) construction number 110117	F.B.R I.VAR S.R.L 37060 ITALY
	PUMPS				
6	Condencer Water Pumps 1	01	Q=423 m3/hr H=99 feet BHP=45.8 kw N=1450rpm	type (A200-320/B)	KSB PUMPS.CO.LTD SINGAPOR (ASIA PACIFIC) PTE.LTD
7	Condencer Water Pumps 2	01	Q=423 m3/hr H=99 feet BHP=45.8 kw N=1450rpm	type (A200-320/B)	KSB PUMPS.CO.LTD SINGAPOR (ASIA PACIFIC) PTE.LTD

8	Condencer Water Pumps 3	01	Q=423 m3/hr H=99 feet BHP=45.8 kw N=1450rpm	type (A200-320/B)	KSB PUMPS.CO.LTD SINGAPOR (ASIA PACIFIC) PTE.LTD
9	Chilled Water Pump 1	01	Q=972 m3/hr H=119 feet BHP=30.66kw N=2950rpm	Type Etanorm M 100-200 M11	KSB PUMPS.CO.LTD SINGAPOR (ASIA PACIFIC) PTE.LTD
10	Chilled Water Pump 2	01	Q=972 m3/hr H=119 feet BHP=30.66kw N=2950rpm	Type Etanorm M 100-200 M11	KSB PUMPS.CO.LTD SINGAPOR (ASIA PACIFIC) PTE.LTD
11	Chilled Water Pump 3	01	Q=972 m3/hr H=119 feet BHP=30.66kw N=2950rpm	Type Etanorm M 100-200 M11	KSB PUMPS.CO.LTD SINGAPOR (ASIA PACIFIC) PTE.LTD
12	Hot Water Pump 1	01	Q=265 m3/hr H=109 feet BHP=7.07kw N=2948rpm	Type Etanorm M-050-160 M11	KSB PUMPS.CO.LTD SINGAPOR (ASIA PACIFIC) PTE.LTD
13	Hot Water Pump 2	01	Q=265 m3/hr H=109 feet BHP=7.07kw N=2948rpm	Type Etanorm M-050-160 M11	KSB PUMPS.CO.LTD SINGAPOR (ASIA PACIFIC) PTE.LTD
	AIR HANDLING UNITS				
14	AIR HANDLING UNIT#1	01	18553 cfm	CLCP035C	Trane Country of origin (Malaysia)
15	AIR HANDLING UNIT#2	01	133117 cfm	CLCP025C	Trane Country of origin (Malaysia)
16	AIR HANDLING UNIT#3	01	16906 cfm	CLCP035C	Trane Country of origin (Malaysia)
17	AIR HANDLING UNIT#4	01	15291 cfm	CLCP030C	Trane Country of origin (Malaysia)
18	AIR HANDLING UNIT#5	01	12424 cfm	CLCP025C	Trane Country of origin (Malaysia)
19	AIR HANDLING UNIT#6	01	15036 cfm	CLCP030C	Trane Country of origin (Malaysia)
20	AIR HANDLING UNIT#7	01	11877 cfm	CLCP025C	Trane Country of origin (Malaysia)
21	AIR HANDLING UNIT#8	01	15502 cfm	CLCP030C	Trane Country of origin (Malaysia)

22	AIR HANDLING UNIT#9	01	13891 cfm	CLCP025C	Trane Country of origin (Malaysia)
23	AIR HANDLING UNIT#10	01	15859 cfm	CLCP030C	Trane Country of origin (Malaysia)
24	AIR HANDLING UNIT#11	01	13082 cfm	CLCP025C	Trane Country of origin (Malaysia)
25	AIR HANDLING UNIT#12	01	18060 cfm	CLCP035C	Trane Country of origin (Malaysia)
26	AIR HANDLING UNIT#13	01	16580 cfm	CLCP030C	Trane Country of origin (Malaysia)
27	AIR HANDLING UNIT#13-R	01	16580cfm	CLCP030C	Trane Country of origin (Malaysia)
	TREATED FRESH AIR UNIT				
28	TREATED FRESH AIR UNIT 1-1	01	11 kw	CLCP0350	Trane Country of origin (Malaysia)
29	TREATED FRESH AIR UNIT 1-2	01	11 kw	CLCP0350	Trane Country of origin (Malaysia)
30	TREATED FRESH AIR UNIT 1-2	01	15 kw	CLCP040	Trane Country of origin (Malaysia)
31	TREATED FRESH AIR UNIT 1-3	01	11 kw	CLCP0350	Trane Country of origin (Malaysia)
32	TREATED FRESH AIR UNIT 1	01	11 kw	CLCP0350	Trane Country of origin (Malaysia)
	INTERKALIMA UNITS				
33	MDC-UNIT	01	Air Flow 8900 m3/hr	MDR-030R	Interkalima
34	MDC-UNIT	01	Air Flow 8900 m3/hr	MDR-030R	Interkalima
	Dust Collector				
35	Dust Collector	01	10234 cfm	Type plus jet (prod code PJ/D.c 4/10/5/01)	AMCO Industries
	EXHAUST FANS				
36	Exhaust Fan-01	01	5.60 kw	ATIL 30	Aerotech
37	Exhaust Fan-01	01	7.46 kw	ATIL 30	Aerotech
38	Exhaust Fan-01	01	0.50 kw	ATIL 16	Aerotech
39	Exhaust Fan-01	01	3.73 kw	ATIL 27	Aerotech
40	Exhaust Fan-01	01	14.92 kw	ATIL 12	Aerotech

	SUPPLY FANS				
41	Supply Fan	01	1.50 kw	ATIL 27	Aerotech
42	Supply Fan	01	5.60 kw	ATIL 24	Aerotech
43	Supply Fan	01	5.60 kw	ATIL 27	Aerotech
44	Supply Fan	01	2.24 kw	A58	Aerotech
	FRESH AIR UNIT				
45	FRESH AIR UNIT	01	5965 cfm	CLCP012C	Trane Quantum Air Handler Country of Origin (Malaysia)
	LAB EXHAUST FANS				
46	Exhaust 1	01	1887 cfm	VK-MD-30-G-111-J300-y	Green Heck
47	Exhaust 2	01	1887 cfm	VK-MD-30-G-111-J300-y	Green Heck
48	Exhaust 3	01	2265 cfm	VK-MD-22-G-111-J150-x	Green Heck
	COOLING TOWERS				
49	CoolingTower 1	01	Water Flow Rate 425.1 m3/hr	CTA-750 WA-N	Nihon Spindle
50	CoolingTower 2	01	Water Flow Rate 425.1 m3/hr	CTA-750 WA-N	Nihon Spindle
	FAN COIL UNITS				
51	FAN COIL UNIT-1	01	0.7 KW	BWQ10	Cooline
52	FAN COIL UNIT-2	01	0.86 KW	CAH2	Cooline
53	FAN COIL UNIT-3	01	0.25 KW	WAQ14	Cooline
54	FAN COIL UNIT-4	01	0.29 KW	WAQ18	Cooline
55	FAN COIL UNIT-5	01	0.18 KW	WHG08	Cooline
56	FAN COIL UNIT-6	01	0.13 KW	WHG06	Cooline
57	FAN COIL UNIT-7	01	0.3 KW	WAQ12	Cooline
58	FAN COIL UNIT-8 (l)	01	0.3 KW	FP-204KM4-V/CFY	Cooline
59	FAN COIL UNIT 8 (ll)	01	0.31 KW	FP-204KM4-V/CFY	Cooline

60	FAN COIL UNIT8 (lll)	01	0.31 KW	FP-204KM4-V/CFY	Cooline
61	FAN COIL UNIT 8 (lv)	01	0.31 KW	FP-204KM4-V/CFY	Cooline
62	FAN COIL UNIT8 (v)	01	0.31 KW	FP-204KM4-V/CFY	Cooline
	Pumps for Air-cooled Chiller				
63	Pumps for Air-cooled Chiller	01	20 kw	96594095-P255-025	Hungary
64	Pumps for Air-cooled Chiller	01	20 kw	96594095-P255-026	Hungary
	AIR CURTAINS				
65	Air Curtain-1	01	0.25 kw	ACSON	Malaysia
66	Air Curtain-2	01	0.25 kw	ACSON	Malaysia
67	Air Curtain-3	01	0.25 kw	ACSON	Malaysia
68	Air Curtain-4	01	0.25 kw	ACSON	Malaysia
	REFRIGERATOR AND FREEZERS				
69	Walk In Refrigerator (unit 1)	01	3-HP (0 deg c)	a)air cooled condensing unit KE 3X-02 nos b)Evaporator unit cooler KHM 21-1-02 nos	Kold Kraft
70	Walk In Refrigerator (unit 2)	01	3-HP (0 deg c)	a)air cooled condensing unit KE 3X-02 nos b)Evaporator unit cooler KHM 21-1-02 nos	Kold Kraft
71	Freezer# 1	01	7.5-HP (-22 deg c)	a)air cooled condensing unit KE 8s-02 nos b)Evaporator unit cooler KHL 30-2-02 nos	Kold Kraft
72	Freezer# 2	01	7.5-HP (-22 deg c)	a)air cooled condensing unit KE 8s-02 nos b)Evaporator unit cooler KHL 30-2-02 nos	Kold Kraft

73	Refrigerator#1	01	2-HP (+4/+8 deg c)	a)air cooled condensing unit KE 2X-02 nos b)Evaporator unit cooler KHM 12-1-02 nos	Kold Kraft
74	Refrigerator#2	01	2-HP (+4/+8 deg c)	a)air cooled condensing unit KE 2X-02 nos b)Evaporator unit cooler KHM 12-1-02 nos	Kold Kraft
75	Freezer# 1	01	3-HP (-22 deg c)	a)air cooled condensing unit KE 3S-02 nos b)Evaporator unit cooler KHU 12-1-02 nos	Kold Kraft
76	Freezer# 2	01	3-HP (-22 deg c)	a)air cooled condensing unit KE 3S-02 nos b)Evaporator unit cooler KHU 12-1-02 nos	Kold Kraft
77	Refrigerator#1	01	2-HP (+4/+8 deg c)	a)air cooled condensing unit KE 3X-02 nos b)Evaporator unit cooler KHM 21-1-02 nos	Kold Kraft
78	Refrigerator#2	01	2-HP (+4/+8 deg c)	a)air cooled condensing unit KE 3X-02 nos b)Evaporator unit cooler KHM 21-1-02 nos	Kold Kraft
79	Freezer# 1	01	3-HP (-22 deg c)	a)air cooled condensing unit KE 3X-02 nos b)Evaporator unit cooler KHU 12-1-02 nos	Kold Kraft
80	Freezer# 2	01	3-HP (-22 deg c)	a)air cooled condensing unit KE 3X-02 nos b)Evaporator unit cooler KHU 12-1-02 nos	Kold Kraft
81	Freezer# 1	01	3-HP (-22 deg c)	a)air cooled condensing unit	Kold Kraft

				KE 5X-02 nos b)Evaporator unit cooler KHL19-1-02 nos	
82	Freezer# 2	01	3-HP (-22 deg c)	a)air cooled condensing unit KE 5X-02 nos b)Evaporator unit cooler KHL19-1-02 nos	Kold Kraft
83	Refrigerator#1	01	2-HP (+2/+4 deg c)	a)air cooled condensing unit KE 2X-02 nos b)Evaporator unit cooler KHM 12-1-02 nos	Kold Kraft
84	Refrigerator#2	01	2-HP (+2/+4 deg c)	a)air cooled condensing unit KE 2X-02 nos b)Evaporator unit cooler KHM 12-1-02 nos	Kold Kraft
	Energy Recovery Wheel				
85	Energy Recovery Wheel	01	Energy Recovery Ventilator (50hz)	ERV 3000i S/N 11-BAM-ERB 300i-2453	By air (Malaysia)
s	SPLIT AC				
86	Split Ac	03	3.5 ton	Miller	USA
87	Split Ac	02	1 ton H/C	Miller	USA
88	Split Ac	04	1 ton	Miller	USA
89	Split Ac	05	2 ton H/C	Miller	USA
90	Split Ac	15	2 ton	Miller	USA
91	Split Ac	03	2.5 ton H/C	Miller	USA
92	Split Ac	11	1.5 ton H/C	Miller	USA
93	Split Ac	07	1.5 ton	Miller	USA
94	Split Ac	03	2 ton	Miller	USA
95	Split Ac	02	2 ton	Miller	USA
96	Cabinet AC	06	2 ton	Gree	China
	HUMIDFIERS				
97	Humidifier AHU#13	01	44 kw, 63.5 A	SF-SKE-60M-400 J3	Canada
98	Humidifier AHU#13A	01	44 kw, 63.5 A	SF-SKE-60M-400 J3	Canada

99	HUMIDFIER OF FAU	01	15 kw, 22 A	SF-SKE-20M-400 J3	Canada
100	Humidifier AHU-1	01	30 kw, 44 A	SF-SKE-400M-400 J3	Canada
101	Humidifier AHU-2	01	30 kw, 44 A	SF-SKE-10M-400 J3	Canada
102	Humidifier AHU-3	01	15 kw, 22 A	SF-SKE-20M-400 J3	Canada
103	Humidifier AHU-4	01	30 kw, 44 A	SF-SKE-10M-400 J3	Canada
104	Humidifier AHU-5	01	30 kw, 44 A	SF-SKE-40M-400 J3	Canada
105	Humidifier AHU-6	01	30 kw, 44 A	SF-SKE-40M-400 J3	Canada
106	Humidifier AHU-7	01	36 kw, 52 A	SF-SKE-50M-400 J3	Canada
107	Humidifier AHU-8	01	15 kw, 22 A	SF-SKE-30M-400 J3	Canada
108	Humidifier AHU-9	01	36 kw, 52 A	SF-SKE-50M-400 J3	Canada
109	Humidifier AHU-10	01	36 kw, 52 A	SF-SKE-50M-400 J3	Canada
110	Humidifier AHU-11	01	36 kw, 52 A	SF-SKE-50M-400 J3	Canada
111	Humidifier AHU-12	01	15 kw, 22 A	SF-SKE-20M-400 J3	Canada

AHU-13RU			
BMS Controllers Information			
Sr No	**Information Type**	**Controller 1 (Master)**	**Controller 2 (Slave)**
1	Series	TAC MN200	TAC MN200
2	Make	Schneider	Schneider
3	Model	MNL20RF3	MNL20RF3
4	Status	operational	operational
Sensors Information			
Sr No	Sensor Type	Model No	Make
1	AHU Inlet air Humidity Sensor		
2	AHU Inlet air Smoke detector		
3	Return Air Temperature Sensor	TE-701-A-5-B	MAMAC Systems
4	DP switch Pre-Filter	50-500PA	Dura
5	DP switch Bag-Filter	50-500PA	Dura
6	Humidifier Pressure Transmitter	MBS3000	Danfoss
7	AHU supply air Temperature Sensor	TE-701-A-5-B	MAMAC Systems
8	AHU supply air Flow Switch	Cemco Type Tc	Columbus Electric
9	Hot Water Return Temp Sensor	TE-703-B-5-B	MAMAC Systems
10	Chilled Water Return Temp Sensor	TE-703-B-5-B	MAMAC Systems
Actuator Information			
Sr No	**Actuator**	**Model No**	**Make**
1	Fresh Air Inlet Damper Actuator		
2	Chilled Water Supply Actuator	MS61-7203	Schneider Duradrive
3	HOT Water Supply Actuator	MS51-7103-160	Schneider Duradrive
AHU-13			
BMS Controllers Information			
Sr No	**Information Type**	**Controller 1 (Master)**	**Controller 2 (Slave)**

1	Series	TAC MN200	TAC MN200
2	Make	Schneider	Schneider
3	Model	MNL20RF3	MNL20RF3
4	Status	operational	operational
Sensors Information			
Sr No	**Sensor Type**	**Model No**	**Make**
1	AHU Inlet air Humidity Sensor		
2	AHU Inlet air Smoke detector		
3	Return Air Temperature Sensor	TE-701-A-5-B	
4	DP switch Pre-Filter	50-500PA	Dura
5	DP switch Bag-Filter	50-500PA	Dura
6	Humidifier Pressure Transmitter		
7	AHU supply air Temperature Sensor	TE-701-A-5-B	MAMAC Systems
8	AHU supply air Flow Switch	Cemco Type Tc	Columbus Electric
9	Hot Water Return Temp Sensor	TE-703-B-5-B	MAMAC Systems
10	Chilled Water Return Temp Sensor	TE-703-B-5-B	MAMAC Systems
Actuator Information			
Sr No	**Actuator**	**Model No**	**Make**
1	Chilled Water Supply Actuator	MS61-7203	Schneider Duradrive
2	HOT Water Supply Actuator	MS51-7103-160	Schneider Duradrive
AHU-12			
BMS Controllers Information			
Sr No	**Information Type**	**Controller 1 (Master)**	**Controller 2 (Slave)**
1	Series	TAC MN200	TAC MN200
2	Make	Schneider	Schneider
3	Model	MNL20RF3	MNL20RF3
4	Status	operational	operational
Sensors Information			
Sr No	**Sensor Type**	**Model No**	**Make**
1	AHU Inlet air Humidity Sensor	HU-224-2-MA	MAMAC Systems

2	AHU Inlet air Smoke detector	SL-2000P	Air products and Control
3	Return Air Temperature Sensor	TE-701-A-5-B	MAMAC Systems
4	DP switch Pre-Filter	50-500PA	Dura
5	DP switch Bag-Filter	50-500PA	Dura
6	Humidifier Pressure Transmitter	MBS3000	Danfoss
7	AHU supply air Temperature Sensor	TE-701-A-5-B	MAMAC Systems
8	AHU supply air Flow Switch	Cemco Type Tc	Columbus Electric
9	Hot Water Return Temp Sensor	TE-703-B-5-B	MAMAC Systems
10	Chilled Water Return Temp Sensor	TE-703-B-5-B	MAMAC Systems
Actuator Information			
Sr No	**Actuator**	**Model No**	**Make**
1	Fresh Air Inlet Damper Actuator	MS4D-8033-160	Schneider Duradrive
2	Chilled Water Supply Actuator	MS51-7103-160	Schneider Duradrive
3	HOT Water Supply Actuator	MS51-7103-160	Schneider Duradrive
AHU-11			
BMS Controllers Information			
Sr No	**Information Type**	**Controller 1 (Master)**	**Controller 2 (Slave)**
1	Series	TAC MN200	TAC MN200
2	Make	Schneider	Schneider
3	Model	MNL20RF3	MNL20RF3
4	Status	operational	operational
Sensors Information			
Sr No	**Sensor Type**	**Model No**	**Make**
1	AHU Inlet air Humidity Sensor	HU-224-2-MA	MAMAC Systems
2	AHU Inlet air Smoke detector	SL-2000P	Air products and Control
3	Return Air Temperature Sensor	TE-701-A-5-B	MAMAC Systems

4	DP switch Pre-Filter	50-500PA	Dura
5	DP switch Bag-Filter	50-500PA	Dura
6	Humidifier Pressure Transmitter	MBS3000	Danfoss
7	AHU supply air Temperature Sensor	TE-701-A-5-B	MAMAC Systems
8	AHU supply air Flow Switch	Cemco Type Tc	Columbus Electric
9	Hot Water Return Temp Sensor	TE-703-B-5-B	MAMAC Systems
10	Chilled Water Return Temp Sensor	TE-703-B-5-B	MAMAC Systems
Actuator Information			
Sr No	**Actuator**	**Model No**	**Make**
1	Fresh Air Inlet Damper Actuator	MS4D-8033-160	Schneider Duradrive
2	Chilled Water Supply Actuator	MS51-7103-160	Schneider Duradrive
3	HOT Water Supply Actuator	MS51-7103-160	Schneider Duradrive
AHU-10			
BMS Controllers Information			
Sr No	**Information Type**	**Controller 1 (Master)**	**Controller 2 (Slave)**
1	Series	TAC MN200	TAC MN200
2	Make	Schneider	Schneider
3	Model	MNL20RF3	MNL20RF3
4	Status	operational	operational
Sensors Information			
Sr No	**Sensor Type**	**Model No**	**Make**
1	AHU Inlet air Humidity Sensor	HU-224-2-MA	MAMAC Systems
2	AHU Inlet air Smoke detector	SL-2000P	Air products and Control
3	Return Air Temperature Sensor	TE-701-A-5-B	MAMAC Systems
4	DP switch Pre-Filter	50-500PA	Dura
5	DP switch Bag-Filter	50-500PA	Dura
6	Humidifier Pressure Transmitter	MBS3000	Danfoss
7	AHU supply air Temperature Sensor	TE-701-A-5-B	MAMAC Systems

8	AHU supply air Flow Switch	Cemco Type Tc	Columbus Electric
9	Hot Water Return Temp Sensor	TE-703-B-5-B	MAMAC Systems
10	Chilled Water Return Temp Sensor	TE-703-B-5-B	MAMAC Systems
Actuator Information			
Sr No	**Actuator**	**Model No**	**Make**
1	Fresh Air Inlet Damper Actuator	MS4D-8033-160	Schneider Duradrive
2	Chilled Water Supply Actuator	MS61-7203	Schneider Duradrive
3	HOT Water Supply Actuator	MS51-7103-160	Schneider Duradrive
4	Exhaust Air Duct Actuator	MS4D-8033-160	Schneider Duradrive
AHU-09			
BMS Controllers Information			
Sr No	**Information Type**	**Controller 1 (Master)**	**Controller 2 (Slave)**
1	Series	TAC MN200	TAC MN200
2	Make	Schneider	Schneider
3	Model	MNL20RF3	MNL20RF3
4	Status	operational	operational
Sensors Information			
Sr No	**Sensor Type**	**Model No**	**Make**
1	AHU Inlet air Smoke detector	SL-2000P	Air products and Control
2	Return Air Temperature Sensor	TE-701-A-5-B	MAMAC Systems
3	DP switch Pre-Filter	50-500PA	Dura
4	DP switch Bag-Filter	50-500PA	Dura
5	Humidifier Pressure Transmitter	MBS3000	Danfoss
6	AHU supply air Temperature Sensor	TE-701-A-5-B	MAMAC Systems
7	AHU supply air Flow Switch	Cemco Type Tc	Columbus Electric
8	Hot Water Return Temp Sensor	TE-703-B-5-B	MAMAC Systems
9	Chilled Water Return Temp Sensor	TE-703-B-5-B	MAMAC Systems

10	Return air Humidity Sensor	HU-224-2-MA	MAMAC Systems
Actuator Information			
Sr No	**Actuator**	**Model No**	**Make**
1	Fresh Air Inlet Damper Actuator	MS4D-8033-160	Schneider Duradrive
2	Chilled Water Supply Actuator	MS61-7203	Schneider Duradrive
3	HOT Water Supply Actuator	MS51-7103-160	Schneider Duradrive
AHU-08			
BMS Controllers Information			
Sr No	**Information Type**	**Controller 1 (Master)**	**Controller 2 (Slave)**
1	Series	TAC MN200	TAC MN200
2	Make	Schneider	Schneider
3	Model	MNL20RF3	MNL20RF3
4	Status	operational	operational
Sensors Information			
Sr No	**Sensor Type**	**Model No**	**Make**
1	AHU Inlet air Humidity Sensor	HU-224-2-MA	MAMAC Systems
2	AHU Inlet air Smoke detector	SL-2000P	Air products and Control
3	Return Air Temperature Sensor	TE-701-A-5-B	MAMAC Systems
4	DP switch Pre-Filter	50-500PA	Dura
5	DP switch Bag-Filter	50-500PA	Dura
6	Humidifier Pressure Transmitter	MBS3000	Danfoss
7	AHU supply air Temperature Sensor	TE-701-A-5-B	MAMAC Systems
8	AHU supply air Flow Switch	Cemco Type Tc	Columbus Electric
9	Hot Water Return Temp Sensor	TE-703-B-5-B	MAMAC Systems
10	Chilled Water Return Temp Sensor	TE-703-B-5-B	MAMAC Systems
11	Return air Humidity Sensor	HU-224-2-MA	MAMAC Systems
Actuator Information			
Sr No	**Actuator**	**Model No**	**Make**
1	Fresh Air Inlet Damper Actuator	MS4D-8033-160	Schneider Duradrive

2	Chilled Water Supply Actuator	MS51-7103-160	Schneider Duradrive
3	HOT Water Supply Actuator	MS51-7103-160	Schneider Duradrive
4	Exhaust Air Duct Actuator	MS4D-8033-160	Schneider Duradrive
AHU-07			
BMS Controllers Information			
Sr No	**Information Type**	**Controller 1 (Master)**	**Controller 2 (Slave)**
1	Series	TAC MN200	TAC MN200
2	Make	Schneider	Schneider
3	Model	MNL20RF3	MNL20RF3
4	Status	operational	operational
Sensors Information			
Sr No	**Sensor Type**	**Model No**	**Make**
1	AHU Inlet air Humidity Sensor	HU-224-2-MA	MAMAC Systems
2	AHU Inlet air Smoke detector	SL-2000P	Air products and Control
3	Return Air Temperature Sensor	TE-701-A-5-B	MAMAC Systems
4	DP switch Pre-Filter	50-500PA	Dura
5	DP switch Bag-Filter	50-500PA	Dura
6	Humidifier Pressure Transmitter	MBS3000	Danfoss
7	AHU supply air Temperature Sensor	TE-701-A-5-B	MAMAC Systems
8	AHU supply air Flow Switch	Cemco Type Tc	Columbus Electric
9	Hot Water Return Temp Sensor	TE-703-B-5-B	MAMAC Systems
10	Chilled Water Return Temp Sensor	TE-703-B-5-B	MAMAC Systems
Actuator Information			
Sr No	**Actuator**	**Model No**	**Make**
1	Fresh Air Inlet Damper Actuator	MS4D-8033-160	Schneider Duradrive
2	Chilled Water Supply Actuator	MS51-7103-160	Schneider Duradrive
3	HOT Water Supply Actuator	MS51-7103-160	Schneider Duradrive
4	Exhaust Air Damper Actuator	MS4D-8033-160	Schneider Duradrive

AHU-06			
BMS Controllers Information			
Sr No	**Information Type**	**Controller 1 (Master)**	**Controller 2 (Slave)**
1	Series	TAC MN200	TAC MN200
2	Make	Schneider	Schneider
3	Model	MNL20RF3	MNL20RF3
4	Status	operational	operational
Sensors Information			
Sr No	**Sensor Type**	**Model No**	**Make**
1	AHU Inlet air Humidity Sensor	HU-224-2-MA	MAMAC Systems
2	AHU Inlet air Smoke detector	SL-2000P	Air products and Control
3	Return Air Temperature Sensor	TE-701-A-5-B	MAMAC Systems
4	DP switch Pre-Filter	50-500PA	Dura
5	DP switch Bag-Filter	50-500PA	Dura
6	Humidifier Pressure Transmitter	MBS3000	Danfoss
7	AHU supply air Temperature Sensor	TE-701-A-5-B	MAMAC Systems
8	AHU supply air Flow Switch	Cemco Type Tc	Columbus Electric
9	Hot Water Return Temp Sensor	TE-703-B-5-B	MAMAC Systems
10	Chilled Water Return Temp Sensor	TE-703-B-5-B	MAMAC Systems
11	Return air Humidity Sensor	HU-224-2-MA	MAMAC Systems
Actuator Information			
Sr No	**Actuator**	**Model No**	**Make**
1	Fresh Air Inlet Damper Actuator	MS4D-8033-160	Schneider Duradrive
2	Chilled Water Supply Actuator	MS51-7103-160	Schneider Duradrive
3	HOT Water Supply Actuator	MS51-7103-160	Schneider Duradrive
4	Exhaust Air Damper Actuator	MS4D-8033-160	Schneider Duradrive
AHU-05			
BMS Controllers Information			
Sr No	**Information Type**	**Controller 1 (Master)**	**Controller 2 (Slave)**
1	Series	TAC MN200	TAC MN200
2	Make	Schneider	Schneider

3	Model	MNL20RF3	MNL20RF3
4	Status	operational	operational
Sensors Information			
Sr No	**Sensor Type**	**Model No**	**Make**
1	AHU Inlet air Humidity Sensor	HU-224-2-MA	MAMAC Systems
2	AHU Inlet air Smoke detector	SL-2000P	Air products and Control
3	Return Air Temperature Sensor	TE-701-A-5-B	MAMAC Systems
4	DP switch Pre-Filter	50-500PA	Dura
5	DP switch Bag-Filter	50-500PA	Dura
6	Humidifier Pressure Transmitter	MBS3000	Danfoss
7	AHU supply air Temperature Sensor	TE-701-A-5-B	MAMAC Systems
8	AHU supply air Flow Switch	Cemco Type Tc	Columbus Electric
9	Hot Water Return Temp Sensor	TE-703-B-5-B	MAMAC Systems
10	Chilled Water Return Temp Sensor	TE-703-B-5-B	MAMAC Systems
11	Return air Humidity Sensor	HU-224-2-MA	MAMAC Systems
Actuator Information			
Sr No	**Actuator**	**Model No**	**Make**
1	Fresh Air Inlet Damper Actuator	MS4D-8033-160	Schneider Duradrive
2	Chilled Water Supply Actuator	MS51-7103-160	Schneider Duradrive
3	HOT Water Supply Actuator	MS51-7103-160	Schneider Duradrive
4	Exhaust Air Damper Actuator	MS4D-8033-160	Schneider Duradrive
5	2nd Exhaust Air Damper Actuator	MS4D-8033-160	Schneider Duradrive
AHU-04			
BMS Controllers Information			
Sr No	**Information Type**	**Controller 1 (Master)**	**Controller 2 (Slave)**
1	Series	TAC MN200	TAC MN200
2	Make	Schneider	Schneider
3	Model	MNL20RF3	MNL20RF3
4	Status	operational	operational

Sensors Information			
Sr No	**Sensor Type**	**Model No**	**Make**
1	AHU Inlet air Humidity Sensor	HU-224-2-MA	MAMAC Systems
2	AHU Inlet air Smoke detector	SL-2000P	Air products and Control
3	Return Air Temperature Sensor	TE-701-A-5-B	
4	DP switch Pre-Filter	50-500PA	Dura
5	DP switch Bag-Filter	50-500PA	Dura
6	Humidifier Pressure Transmitter	MBS3000	Danfoss
7	AHU supply air Temperature Sensor	TE-701-A-5-B	MAMAC Systems
8	AHU supply air Flow Switch	Cemco Type Tc	Columbus Electric
9	Hot Water Return Temp Sensor	TE-703-B-5-B	MAMAC Systems
10	Chilled Water Return Temp Sensor	TE-703-B-5-B	MAMAC Systems
11	Return air Humidity Sensor	HU-224-2-MA	MAMAC Systems
12	Inlet Air Temperature Sensor	TE-701-A-5-B	MAMAC Systems
Actuator Information			
Sr No	**Actuator**	**Model No**	**Make**
1	Fresh Air Inlet Damper Actuator	MS4D-8033-160	Schneider Duradrive
2	Chilled Water Supply Actuator	MS51-7103-160	Schneider Duradrive
3	Exhaust Air Damper Actuator	MS4D-8033-160	Schneider Duradrive
AHU-03			
BMS Controllers Information			
Sr No	**Information Type**	**Controller 1 (Master)**	**Controller 2 (Slave)**
1	Series	TAC MN200	TAC MN200
2	Make	Schneider	Schneider
3	Model	MNL20RF3	MNL20RF3
4	Status	operational	operational
Sensors Information			
Sr No	**Sensor Type**	**Model No**	**Make**
1	AHU Inlet air Humidity Sensor	HU-224-2-MA	MAMAC Systems

2	AHU Inlet air Smoke detector	SL-2000P	Air products and Control
3	Return Air Temperature Sensor	TE-701-A-5-B	
4	DP switch Pre-Filter	50-500PA	Dura
5	DP switch Bag-Filter	50-500PA	Dura
6	Humidifier Pressure Transmitter	MBS3000	Danfoss
7	AHU supply air Temperature Sensor	TE-701-A-5-B	MAMAC Systems
8	AHU supply air Flow Switch	Cemco Type Tc	Columbus Electric
9	Hot Water Return Temp Sensor	TE-703-B-5-B	MAMAC Systems
10	Chilled Water Return Temp Sensor	TE-703-B-5-B	MAMAC Systems
11	Return air Humidity Sensor	HU-224-2-MA	MAMAC Systems
12	Inlet Air Temperature Sensor	TE-701-A-5-B	MAMAC Systems
Actuator Information			
Sr No	**Actuator**	**Model No**	**Make**
1	Fresh Air Inlet Damper Actuator	MS4D-8033-160	Schneider Duradrive
2	Chilled Water Supply Actuator	MS51-7103-160	Schneider Duradrive
3	Exhaust Air Damper Actuator	MS4D-8033-160	Schneider Duradrive
AHU-02			
BMS Controllers Information			
Sr No	**Information Type**	**Controller 1 (Master)**	**Controller 2 (Slave)**
1	Series	TAC MN200	TAC MN200
2	Make	Schneider	Schneider
3	Model	MNL20RF3	MNL20RF3
4	Status	operational	operational
Sensors Information			
Sr No	**Sensor Type**	**Model No**	**Make**
1	AHU Inlet air Humidity Sensor	HU-224-2-MA	MAMAC Systems
2	AHU Inlet air Smoke detector	SL-2000P	Air products and Control

3	Return Air Temperature Sensor	TE-701-A-5-B	
4	DP switch Pre-Filter	50-500PA	Dura
5	DP switch Bag-Filter	50-500PA	Dura
6	Humidifier Pressure Transmitter	MBS3000	Danfoss
7	AHU supply air Temperature Sensor	TE-701-A-5-B	MAMAC Systems
8	AHU supply air Flow Switch	Cemco Type Tc	Columbus Electric
9	Hot Water Return Temp Sensor	TE-703-B-5-B	MAMAC Systems
10	Chilled Water Return Temp Sensor	TE-703-B-5-B	MAMAC Systems
11	Return air Humidity Sensor	HU-224-2-MA	MAMAC Systems
12	Inlet Air Temperature Sensor	TE-701-A-5-B	MAMAC Systems
Actuator Information			
Sr No	**Actuator**	**Model No**	**Make**
1	Fresh Air Inlet Damper Actuator	MS4D-8033-160	Schneider Duradrive
2	Chilled Water Supply Actuator	MS51-7103-160	Schneider Duradrive
3	HOT Water Supply Actuator	MS51-7103-160	Schneider Duradrive
AHU-01			
BMS Controllers Information			
Sr No	**Information Type**	**Controller 1 (Master)**	**Controller 2 (Slave)**
1	Series	TAC MN200	TAC MN200
2	Make	Schneider	Schneider
3	Model	MNL20RF3	MNL20RF3
4	Status	operational	operational
Sensors Information			
Sr No	**Sensor Type**	**Model No**	**Make**
1	AHU Inlet air Humidity Sensor	HU-224-2-MA	MAMAC Systems
2	AHU Inlet air Smoke detector	SL-2000P	Air products and Control
3	Return Air Temperature Sensor	TE-701-A-5-B	
4	DP switch Pre-Filter	50-500PA	Dura
5	DP switch Bag-Filter	50-500PA	Dura

6	Humidifier Pressure Transmitter	MBS3000	Danfoss
7	AHU supply air Temperature Sensor	TE-701-A-5-B	MAMAC Systems
8	AHU supply air Flow Switch	Cemco Type Tc	Columbus Electric
9	Hot Water Return Temp Sensor	TE-703-B-5-B	MAMAC Systems
10	Chilled Water Return Temp Sensor	TE-703-B-5-B	MAMAC Systems
11	Return air Humidity Sensor	HU-224-2-MA	MAMAC Systems
12	Inlet Air Temperature Sensor	TE-701-A-5-B	MAMAC Systems
Actuator Information			
Sr No	**Actuator**	**Model No**	**Make**
1	Fresh Air Inlet Damper Actuator	MS4D-8033-160	Schneider Duradrive
2	Chilled Water Supply Actuator	MS61-7203	Schneider Duradrive
3	HOT Water Supply Actuator	MS51-7103-160	Schneider Duradrive

Serial No	Equip Type	Make	Installed Location	Model No	Ratings (kw/hp) @ 380V-480V
1	VFD	Schneider	Plant Room Condenser Pump 1	ATV21HD75N4	75/100
2	VFD	Schneider	Plant Room Condenser Pump 2	ATV21HD75N4	75/100
3	VFD	Schneider	Plant Room Condenser Pump 3	ATV21HD75N4	75/100
4	VFD	Schneider	Plant Room Primary Pump 1	ATV71HD37M3X	37/50
5	VFD	Schneider	Plant Room Primary Pump 2	ATV21HD30N4	30/40
6	VFD	Schneider	Plant Room Primary Pump 3	ATV21HD37N4	37/50
7	VFD	Schneider	Plant Room Hot Water Pump 1	ATV21HD11N4	11/15
8	VFD	Schneider	Plant Room Hot Water Pump 2	ATV312HD11N4	11/15
9	VFD	Schneider	Cooling Tower Fan1	ATV212HU75N4	7.5/10
10	VFD	Schneider	Cooling Tower Fan2	ATV21HU75N4	7.5/10
11	VFD	Schneider	Cooling Tower Fan3	ATV21HU75N4	7.5/10
12	VFD	Schneider	Cooling Tower Fan4	ATV21HU75N4	7.5/10
13	VFD	Schneider	Cooling Tower Fan5	ATV21HU75N4	7.5/10
14	VFD	Schneider	Cooling Tower Fan6	ATV21HU75N4	7.5/10
15	VFD	Schneider	Roof Top AHU-13RU	ATV21HD18N4	18.5/25
16	VFD	Schneider	AHU-13	ATV21HD18N4	18.5/25
17	VFD	Schneider	TFU-1	ATV212HD11N4 (Supply)	11/15
				ATV212HD11N4 (Return)	11/15
18	VFD	Schneider	TFU 1-3	ATV21HD11N4 (Supply)	11/15
				ATV212HD11N4 (Return)	11/15
19	VFD	Schneider	TFU-2	ATV212HD15N4 (Supply)	15/20
				ATV21HD11N4 (Return)	15/20

20	VFD	Schneider	TFU-1-2	ATV21HD11N4 (Supply)	11/15
				ATV21HD11N4 (Return)	11/15
21	VFD	Schneider	TFU1-1	ATV21HD11N4 (Supply)	11/15
				ATV21HD11N4 (Return)	11/15
22	VFD	Schneider	FAU	ATV212HU55N4	5.5/7.5
23	VFD	Schneider	Small Exaust Fan	ATV21HD11N4	11/15
24	VFD	Schneider	Large Exaust Fan	ATV21HD37N4	30/50
25	VFD	Schneider	Large Exaust Fan	ATV71HD30M3X	30/50

Plant Room BMS Controllers Information					
Sr No	**Cabinet #**	**Controller 1**	**Served Eqipment**	**Make**	**Location**
1	C1	MNL-11R	HWG	Schneider	HWG Side Location
2	C2	MNL-11R	EF	Schneider	HWG Side Location
3	C3	MNL-11R	EF	Schneider	HWG Side Location
4	C4	MNL-11R	?	Schneider	HWG Side Location
5	C1	MNL-20RF3	Chiller-2	Schneider	Pumps Side Location
6	C2	MNL-20RF3	Chiller-1	Schneider	Pumps Side Location
7	C3	MNL-20RF3	Chiller-3	Schneider	Pumps Side Location
8	C4	MNL-20RF3	HWP CTs, HWG Exaust, HWP Header	Schneider	Pumps Side Location
9	C5	MNL-800	Flow Sensors	Schneider	Pumps Side Location
10	C6	MNL-11R	Expansion Tank Sensors	Schneider	Pumps Side Location
11	C7	MNL-20RF3	Temp (CHWS) PT(CHWS,CHWR)	Schneider	Pumps Side Location
12	C8	MNL-20RF3	Temp (CHWR,CWR,CWS)	Schneider	Pumps Side Location
Hot Water Generator Sensors Information					
Sr No	**Sensor Type**	**Model No**	**Make**		
1	Hot Water Supply Temperature Sensor	TE-703-B-5-B	MAMAC Systems		
2	Hot Water Return Temperature Sensor	TE-703-B-5-B	MAMAC Systems		
3	Hot Water generator Exaust Temperature Sensor				
4	Hot Water Flow Transmitter		Data Industrial		
5	Hot Water Expansion Tank Level Switch	Lotect C8	Anderson		
6	Hot Water Expansion Tank pressure Transmitter	MBS3000	Danfoss		
Chiller-1 Sensors Information					
Sr No	**Actuator**	**Model No**	**Make**		
1	Chilled Water Supply Temperature Sensor	TE-703-B-5-B	MAMAC Systems		

2	Chilled Water Flow Transmitter	Series-200	Data Industrial		
3	Condensor Water return Temperature sensor	TE-703-B-5-B	MAMAC Systems		
Chiller-2 Sensors Information					
Sr No	**Actuator**	**Model No**	**Make**		
1	Chilled Water Supply Temperature Sensor	TE-703-B-5-B	MAMAC Systems		
2	Chilled Water Flow Transmitter	Series-200	Data Industrial		
3	Condensor Water return Temperature sensor	TE-703-B-5-B	MAMAC Systems		
Chiller-3 Sensors Information					
Sr No	**Actuator**	**Model No**	**Make**		
1	Chilled Water Supply Temperature Sensor	TE-703-B-5-B	MAMAC Systems		
2	Chilled Water Flow Transmitter	Series-200	Data Industrial		
3	Condensor Water return Temperature sensor	TE-703-B-5-B	MAMAC Systems		
Chiller-3 Sensors Information					
Sr No	**Actuator**	**Model No**	**Make**		
1	Chilled Water Supply Temperature Sensor	TE-703-B-5-B	MAMAC Systems		
2	Chilled Water Flow Transmitter	Series-200	Data Industrial		
3	Condensor Water return Temperature sensor	TE-703-B-5-B	MAMAC Systems		
Main Water Headers Sensors Information					
Sr No	**Actuator**	**Model No**	**Make**		
1	Condensor Water return Header Temperature sensor	TE-703-B-5-B	MAMAC Systems		
2	Condensor Water Supply Header Temperature sensor	TE-703-B-5-B	MAMAC Systems		
3	Condensor Water Flow Transmitter	Series-200	Data Industrial		
4	Chilled Water return Header Temperature sensor	TE-703-B-5-B	MAMAC Systems		
5	Chilled Water pressure Transmitter	MBS3000	Danfoss		
6	Chilled Water Supply Header Temperature sensor	TE-703-B-5-B	MAMAC Systems		
7	Chilled Water Flow Transmitter				
Chiller-3 Sensors Information					

Sr No	Actuator	Model No	Make		Remarks
1	Chilled Water Supply Temperature Sensor	TE-703-B-5-B	MAMAC Systems		
2	Chilled Water Flow Transmitter	Series-200	Data Industrial		
3	Condensor Water return Temperature sensor	TE-703-B-5-B	MAMAC Systems		
Chilled water Expansion Tank Sensors Information					
Sr No	**Actuator**	**Model No**	**Make**		**Remarks**
1	Level Switch	Lotect C8	Anderson		
2	pressure Transmitter	MBS3000	Danfoss		

TFU-1			
Fresh Air Inlet Sensors			
Sr No	**Sensor Type**	**Model No**	**Make**
1	Temperature Sensor	TE-701-A-5-B	MAMAC Systems
2	Humidity Sensor	HU-224-2-MA	MAMAC Systems
Upper Location Sensors			
Sr No	**Sensor Type**	**Model No**	**Make**
1	Temperature Sensor	TE-701-A-5-B	MAMAC Systems
2	Humidity Sensor	HU-224-2-MA	MAMAC Systems
3	Pressure Transmitter	PR-276-R10-MA	MAMAC Systems
4	DP switch above Filter	50-500PA	Dura
5	DP switch Pre Filter	50-500PA	Dura
Treated Air out Sensors			
Sr No	**Actuator**	**Model No**	**Make**
1	Pressure Transmitter	PR-276-R10-MA	MAMAC Systems
2	Air Flow Limit Switch	Cemco Type Tc	Columbus Electric
3	Humidity Sensor	HU-224-2-MA	MAMAC Systems
4	Temperature Sensor	TE-701-A-5-B	MAMAC Systems
Chilled Water Supply Actuator			
Sr No	**Actuator**	**Model No**	**Make**
1	Chilled Water Supply Actuator	MS51-7103-160	Schneider Duradrive
TFU 1-3			
Fresh Air Inlet Sensors			
Sr No	**Sensor Type**	**Model No**	**Make**
1	Temperature Sensor	TE-701-A-5-B	MAMAC Systems
2	Humidity Sensor	HU-224-2-MA	MAMAC Systems
Upper Location Sensors			
Sr No	**Sensor Type**	**Model No**	**Make**
1	Temperature Sensor	TE-701-A-5-B	MAMAC Systems
2	Humidity Sensor	HU-224-2-MA	MAMAC Systems
3	Pressure Transmitter	PR-276-R10-MA	MAMAC Systems
4	DP switch above Filter	50-500PA	Dura
5	DP switch Pre Filter	50-500PA	Dura
Treated Air out Sensors			
Sr No	**Actuator**	**Model No**	**Make**
1	Pressure Transmitter	PR-276-R10-MA	MAMAC Systems
2	Air Flow Limit Switch	Cemco Type Tc	Columbus Electric
3	Humidity Sensor	HU-224-2-MA	MAMAC Systems
4	Temperature Sensor	TE-701-A-5-B	MAMAC Systems
Chilled Water Supply Actuator			

Sr No	Actuator	Model No	Make
1	Chilled Water Supply Actuator	MS51-7103-160	Schneider Duradrive
TFU 2			
Fresh Air Inlet Sensors			
Sr No	**Sensor Type**	**Model No**	**Make**
1	Temperature Sensor	TE-701-A-5-B	MAMAC Systems
2	Humidity Sensor	HU-224-2-MA	MAMAC Systems
Upper Location Sensors			
Sr No	**Sensor Type**	**Model No**	**Make**
1	Temperature Sensor	TE-701-A-5-B	MAMAC Systems
2	Humidity Sensor	HU-224-2-MA	MAMAC Systems
3	Pressure Transmitter	PR-276-R10-MA	MAMAC Systems
4	DP switch above Filter	50-500PA	Dura
5	DP switch Pre Filter	50-500PA	Dura
Treated Air out Sensors			
Sr No	**Actuator**	**Model No**	**Make**
1	Pressure Transmitter	PR-276-R10-MA	MAMAC Systems
2	Air Flow Limit Switch	Cemco Type Tc	Columbus Electric
3	Humidity Sensor	HU-224-2-MA	MAMAC Systems
4	Temperature Sensor	TE-701-A-5-B	MAMAC Systems
Chilled Water Supply Actuator			
Sr No	**Actuator**	**Model No**	**Make**
1	Chilled Water Supply Actuator	MS61-7203	Schneider Duradrive
TFU 1-2			
Fresh Air Inlet Sensors			
Sr No	**Sensor Type**	**Model No**	**Make**
1	Temperature Sensor	TE-701-A-5-B	MAMAC Systems
2	Humidity Sensor	HU-224-2-MA	MAMAC Systems
Upper Location Sensors			
Sr No	**Sensor Type**	**Model No**	**Make**
1	Temperature Sensor	TE-701-A-5-B	MAMAC Systems
2	Humidity Sensor	HU-224-2-MA	MAMAC Systems
3	Pressure Transmitter	PR-276-R10-MA	MAMAC Systems
4	DP switch above Filter	50-500PA	Dura
5	DP switch Pre Filter	50-500PA	Dura
Treated Air out Sensors			
Sr No	**Actuator**	**Model No**	**Make**
1	Pressure Transmitter	PR-276-R10-MA	MAMAC Systems
2	Air Flow Limit Switch	Cemco Type Tc	Columbus Electric
3	Humidity Sensor	HU-224-2-MA	MAMAC Systems
4	Temperature Sensor	TE-701-A-5-B	MAMAC Systems

Chilled Water Supply Actuator			
Sr No	**Actuator**	**Model No**	**Make**
1	Chilled Water Supply Actuator	MS51-7103-160	Schneider Duradrive
TFU 1-1			
Fresh Air Inlet Sensors			
Sr No	**Sensor Type**	**Model No**	**Make**
1	Temperature Sensor	TE-701-A-5-B	MAMAC Systems
2	Humidity Sensor	HU-224-2-MA	MAMAC Systems
Upper Location Sensors			
Sr No	**Sensor Type**	**Model No**	**Make**
1	Temperature Sensor	TE-701-A-5-B	MAMAC Systems
2	Humidity Sensor	HU-224-2-MA	MAMAC Systems
3	Pressure Transmitter	PR-276-R10-MA	MAMAC Systems
4	DP switch above Filter	50-500PA	Dura
5	DP switch Pre Filter	50-500PA	Dura
Treated Air out Sensors			
Sr No	**Actuator**	**Model No**	**Make**
1	Pressure Transmitter	PR-276-R10-MA	MAMAC Systems
2	Air Flow Limit Switch	Cemco Type Tc	Columbus Electric
3	Humidity Sensor	HU-224-2-MA	MAMAC Systems
4	Temperature Sensor	TE-701-A-5-B	MAMAC Systems
Chilled Water Supply Actuator			
Sr No	**Actuator**	**Model No**	**Make**
1	Chilled Water Supply Actuator	MS51-7103-160	Schneider Duradrive
FAU			
FAU Sensors			
Sr No	**Sensor Type**	**Model No**	**Make**
1	Chilled Water Return Temperature Sensor	TE-703-B-5-B	MAMAC Systems
2	Hot Water Return Temperature Sensor	TE-703-B-5-B	MAMAC Systems
3	DP switch Bag Filter	50-500PA	Dura
4	DP switch Pre Filter	50-500PA	Dura
5	Pressure Transmitter	PR-276-R10-MA	MAMAC Systems
6	Air Flow Limit Switch	Cemco Type Tc	Columbus Electric
7	Humidity Sensor		
8	Temperature Sensor	TE-701-A-5-B	MAMAC Systems
Water Supply Actuator			
Sr No	**Actuator**	**Model No**	**Make**
1	Chilled Water Supply Actuator	MS61-7203	Schneider Duradrive
2	Hot Water Supply Actuator	MS51-7103-160	Schneider Duradrive
Large Exaust			
Sensors			

Sr No	Sensor Type	Model No	Make
1	DP switch Filter	50-500PA	Dura
2	Smoke Detector	SL-2000P	Air products and Control
Exaust Air Actuator			
Sr No	**Actuator**	**Model No**	**Make**
1	Exaust Air Actuator	MNL-V2RV3-2	Schneider
Small Exaust			
Sensors			
Sr No	**Sensor Type**	**Model No**	**Make**
1	DP switch Filter	50-500PA	Dura
2	Smoke Detector	SL-2000P	Air products and Control
3	Pressure Transmitter	PR-276-R10-MA	MAMAC Systems
Roof Top Controllers Information			
Sr No	**Served Equipment**	**Model No**	**Make**
1	AHU13-C2	MNL-20RF3	Schneider
2	AHU13-C3	MNL-20RF3	Schneider
3	AHU13B-C1	MNL-20RF3	Schneider
4	AHU13B- C2	MNL-20RF3	Schneider
5	AHU13B- C3	MNL-20RF3	Schneider
6	FAU-C1	MNL-20RF3	Schneider
7	FAU-C2	MNL-20RF3	Schneider
8	FAU-C3	MNL-20RF3	Schneider
9	EXAUST FAN-5	MNL-20RF3	Schneider
10	EXAUST FAN-R4	MNL-20RF3	Schneider
11	AHU13-C1	MNL-20RF3	Schneider
12	TFU 1-4 C1	MNL-20RF3	Schneider
13	TFU 1-4 C2	MNL-20RF3	Schneider
14	TFU 1-3 C1	MNL-20RF3	Schneider
15	TFU 1-3 C2	MNL-20RF3	Schneider
16	TFU 2-C1	MNL-20RF3	Schneider
17	TFU 2-C2	MNL-20RF3	Schneider
18	TFU 1-2 C1	MNL-20RF3	Schneider
19	TFU 1-2 C2	MNL-20RF3	Schneider
20	TFU 1-1 C1	MNL-20RF3	Schneider
21	TFU 1-1 C2	MNL-20RF3	Schneider
22	TFU 1-4 C3	MNL-20RF3	Schneider
23	TFU 1-4 C4	MNL-20RF3	Schneider
24	TFU 1-3 C3	MNL-20RF3	Schneider
25	TFU 1-3 C4	MNL-20RF3	Schneider

26	TFU 2- C3	MNL-20RF3	Schneider
27	TFU 2- C4	MNL-20RF3	Schneider
28	TFU 1-2- C3	MNL-20RF3	Schneider
29	TFU 1-2- C4	MNL-20RF3	Schneider
30	TFU 1-1- C3	MNL-20RF3	Schneider
31	TFU 1-1- C4	MNL-20RF3	Schneider

Variable Air Volume Boxes				
SR#		Qty	Model	Description
1	VAV	32 nos	NBOBOOB	CFM 450 With MN-S4 & MNL-V2RV3
2	VAV	08 nos	NBOBOOB	CFM 1000 With MN-S4 & MNL-V2RV3

Ventry Valves				
SR#		**Qty**	**Model**	**Description**
1	ventury valve	O1 no	EXVB212M-AMEHC	Dual 12" Celeris Exaust VALVE
2	ventury valve	O1 no	EXVB214M-AMEHC	Dual 14" Celeris Exaust VALVE
3	ventury valve	O1 no	EXVB112M-AMEHC	12" Exaust Celeris VALVE
4	ventury valve	O3 nos	EXVB114M-AMEHC	14" Exaust Celeris VALVE
5	ventury valve	11 nos	EXVB110M-AMEHC	10" Hood Exaust Celeris VALVE
6	ventury valve	O1 no	MAVA214M-AMEHC	Dual 14" Celeris Supply VALVE
7	ventury valve	O3 nos	MAVA112M-AMEHC	12" Celeris Supply VALVE
8	ventury valve	O3 nos	MAVA114M-AMEHC	14" Celeris Supply VALVE
9	ventury valve	O8 nos	EXVB108M-AMEHC	8" Celeris Exaust VALVE
10	ventury valve	O8 nos	MAVA108M-AMEHC	8" Celeris Supply VALVE
11	ventury valve	11 nos	VSS1-0100-A0N	Sash Sensor
12	ventury valve	11 nos	FHM631-ENG	Fume Hood Monitor