



**STATE LIFE**  
INSURANCE CORPORATION OF PAKISTAN

# **TENDER DOCUMENTS**

**FOR**

**OPERATION, MAINTENANCE, SERVICING  
AND OVERHAULING WORKS**

**OF**

**AIR-CONDITIONING PLANTS/SYSTEM AND ALLIED EQUIPMENTS**  
**INSTALLED AT STATE LIFE BUILDING NO.3,**  
**THANDI SARAQ, HYDERABAD.**

# **CONTENTS**

<b>SR. No.</b>	<b>CONTENTS</b>	<b>INDEX</b>
<b>01.</b>	Tender.	Section - 1
<b>02.</b>	Instructions to Tenderers.	Section - 2
<b>03.</b>	Conditions of Contract.	Section - 3
<b>04.</b>	General Requirements.	Section - 4
<b>05.</b>	Scope of work.	Section - 5
<b>06.</b>	Part-A, List of Minimum Operation & Maintenance Staff. Part-B Required Qualifications & Experience of Operation & Maintenance Staff.	Section - 6
<b>07.</b>	List of Air conditioning Plants and Equipment List of Tools & Instruments.	Section - 7
<b>08.</b>	Format of Contract Agreement.	Section - 8
<b>09.</b>	Evaluation Criteria For Post qualification of Contractors	Section - 9

## INDEX

CLAUSE	TITLE	PAGE
<b><u>SECTION-01</u></b>		
	Tender	06-07
	Memorandum	08
	Schedule of Prices	09
	Appendix-1, List of Proposed Operation & Maintenance Staff Appendix-2, Salary of operation & maintenance staff	10-11
<b><u>SECTION-02</u></b> <b><u>INSTRUCTIONS TO TENDERERS</u></b>		
01	Documents	12
02	Bidder to be conversant with Documents	12
03	Addenda	12
04	Documents to be Submitted with Tender & General conditions applicable to Tender.	12
05	Submission of Tender	13
06	Bid Security	13
07	Format of Contract and Performance Bond	13
08	Site Visit	13
09	Constitution of Organization Tendering	14
10	Bidder Address to be Supplied	14
11	Acceptance	14
12	Taking over of Plants, Equipment and System and commencement of work.	15
13	Rights	15

CLAUSE	TITLE	PAGE
<b>SECTION-03</b>		
<b><u>CONDITIONS OF CONTRACT</u></b>		
01	Definition and Interpretation	16
02	Extent of Contract	17
03	Assignment and Sub-Letting	18
04	Contract Documents	18
05	General Obligations	18
06	Power of the Employer's Representative. Duties of Engineers Representative	19
07	Contractor's Superintendence, Agent & Employees	20-21
08	Watch and Care of Works	22
09	Protection of works and Materials	22
10	Compliance with Statues, Regulations, etc	23
11	Instruments and Tools	23
12	Laborer / Worker	23
13	Factory Acts and Labor Laws	24
14	Bills, Certificates and Payments	24
15	Deduction of Amount from Monthly Bill	25
16	Taxes	25
17	Insurance	25
18	Special Obligations of the Contractor	26
19	Notices	26
20	Termination	27
21	Force Majeure	27
22	Settlement of Disputes	27-28

<b>CLAUSE</b>	<b>TITLE</b>	<b>PAGE</b>
<b><u>SECTION-04</u></b>		
01	<i>General Requirements</i>	29-32
02	<i>Major Repairs</i>	33
<b><u>SECTION-05</u></b>		
01	<i>Scope of Work</i>	34
02	<i>Plant Operation</i>	35
03	<i>Annual Servicing &amp; Maintenance</i>	36-38
<b><u>SECTION-06</u></b>		
01	<i>List of Minimum Operation &amp; Maintenance Staff</i>	39
02	<i>Required Qualification &amp; Experience of Operation &amp; Maintenance Staff</i>	40
<b><u>SECTION-07</u></b>		
01	<i>List of Air-Conditioning Plants and equipments</i>	41-42
02	<i>List of Tools &amp; Equipments</i>	43-44
<b><u>SECTION-08</u></b>		
01	<i>Form of Contract Agreement</i>	45-46
<b><u>SECTION-09</u></b>		
01	<i>Evaluation Criteria For Post qualification of Contractors</i>	47-48

## **SECTION -01**

### **OPERATION, MAINTENANCE ,SERVICING & OVERHAULING WORKS OF AIR CONDITIONING PLANTS/SYSTEM AND ALLIED EQUIPMENTS INSTALLED AT STATE LIFE BUILDING NO.3, TANDI SARAQ, HYDERABAD.**

## **TENDER**

(The Tenderers are required to fill in all the blank spaces in the Tender, Memorandum, Appendix-1 and various Schedules which form part of this tender)

#### **In charge (Real Estate)**

State Life Insurance Corporation of Pakistan,  
Real Estate Department,  
7<sup>th</sup> Floor, State Life Building No.3,  
Thandi sarak,  
**Hyderabad.**

Dear Sir,

1. Having examined the tender documents, schedules, site conditions and addenda Nos. for the above named works, we, the undersigned offer to carry out the said works in accordance with the said tender documents, schedules, site conditions and addenda Nos. and in all respects in accordance with the conditions as for as applicable for the sum named in the Memorandum annexed hereto or such other sum as may be ascertained in accordance with the conditions of contract.
2. In consideration of your consent to examine this tender, we undertake if our tender is accepted:-
  - a) To commence the work within the period mentioned in the Memorandum on written orders to commence.
  - b) To sign the formal Contract Agreement after issuance of the Letter of Award of work and to pay all costs towards the preparation of Contract Agreement.
  - c) To abide by and fulfill all the terms and provisions of the said conditions of contract.

3. The bid security has been tendered as details given in the Memorandum, the full value of which is to be absolutely forfeited by you, without prejudice to any other rights and remedies which you may have, should we fail to commence the work or execute the formal Contract Agreement, within the periods specified above, otherwise the said sum of bid entered into and executed by us on acceptance of our tender.
4. We hereby confirm that we have examined the tender documents and schedules, have inspected the site and have obtained all the information which may affect this tender. We understand that no claim will be admitted by you which may arise from our pleading ignorance of the nature of works.
5. We agree to abide by this tender for the period stated in Memorandum from the date of opening of the tenders and it shall remain binding upon us and may be accepted at any time before the expiration of that period.
6. Unless and until a formal Contract Agreement is prepared and executed this tender together with your written acceptance thereof and tender documents shall constitute a binding contract between us and shall be deemed for all purpose to be the Contract Agreement.
7. understand that certain information applicable to the contract which is the subject of this tender is set forth for ease of reference in the Memorandum annexed hereto.
8. We understand that you are not bound to accept the lowest or any tender you may receive, and that you will not defray any expenses incurred by us in tendering.

Dated this \_\_\_\_\_ day of \_\_\_\_\_ 2018.

Signature \_\_\_\_\_

In the capacity of \_\_\_\_\_

duly authorized to sign tenders for and on behalf of

\_\_\_\_\_

(Full Address)

\_\_\_\_\_

Witness \_\_\_\_\_

Address \_\_\_\_\_

Occupation \_\_\_\_\_

**MEMORANDUM**  
**(Blanks to be filled in by the Tenderer)**

a.	Title of Work to be endorsed on the sealed package of the tender.	Operation , Maintenance, Servicing & Overhauling work of Air-Conditioning plants and allied equipment installed at State Life Building NO.3, Thandi Sarak, Hyderabad
b.	Tendered Price of the Work	Rs. _____ per month (Rupees _____).
c.	Validity of the tender	One hundred twenty (120) Days from Date of opening of Bid.
d.	Amount of Bid Security in the form of Pay Order/ bank Draft	2% of one (01) Year Contract Value in favor of State Life Insurance Corporation of Pakistan.
e.	Commencement of Work	Not later than seven (07) Days from the Date of Issuance of Letter of Award of Work.
f.	Amount of third party insurance (minimum for any one incident for loss of property or life)	Rs. 500,000.00 (Rupees Five Hundred Thousand Only)
g.	Workmen's compensation policy	As per the requirement of workman's compensation Act.
h.	Venue/city	State Life Building, No.3, Thandi Sarak, Hyderabad
i.	Working days	Six (06) working days except Gazette holiday (08:30 Hrs to 17:30 Hrs) or adjustable as per requirement by In charge RE, Hyderabad.
j.	Retention Money	5% Retention Money will be deducted from each monthly bill and shall be released after satisfactory completion of the contract period.
k.	Period of Contract	One Year may be extended for further Two (02) years with mutual consent at Inflation rate announced by state bank for last year only

Dated this \_\_\_\_\_ day of \_\_\_\_\_ 2018.

Signature \_\_\_\_\_

In the capacity of \_\_\_\_\_

duly authorized to sign tenders for and behalf of \_\_\_\_\_

(Full Address) \_\_\_\_\_

Witness \_\_\_\_\_

Address \_\_\_\_\_

Occupation \_\_\_\_\_



## SCHEDULE OF PRICES

1. Charges for Operation, Maintenance, Servicing and Overhauling Works of the Air conditioning Plants/System & allied equipments according to the Conditions of Contract & Scope of Works as detailed in the tender documents.

Rs. \_\_\_\_\_ Per Month  
(Rupees \_\_\_\_\_  
\_\_\_\_\_ Per Month)

2. Additional charges for operation/Emergency works of the Plants/System.

a) Beyond normal operating hours on working day.      Rs.600/- Per Hour  
(Rupees Six Hundred Per Hour) Fixed

b) On Sunday and Public Holidays.      Rs.700/-Per Hour  
(Rupees Seven Hundred Per Hour)  
Minimum payment for four hours.

Dated this \_\_\_\_\_ day of \_\_\_\_\_ 2018.

Signature \_\_\_\_\_

In the capacity of \_\_\_\_\_

duly authorized to sign tenders for and behalf of \_\_\_\_\_

\_\_\_\_\_  
(Full Address) \_\_\_\_\_

\_\_\_\_\_  
Witness \_\_\_\_\_

Address \_\_\_\_\_

Occupation \_\_\_\_\_

**APPENDIX-1 TO TENDER**  
**LIST OF OPERATION & MAINTENANCE STAFF REQUIRED**  
**(TO BE FILLED IN BY THE TENDERER)**

S. No	Quantity	Designation/ Name	Qualifications	Experience
01	01	Site Supervisor	D.A.E (Mech/Air Conditioning)	Minimum 06 years in Respective Field
02	02	A.C Plant Operators	-DO-	3-5 Years in Respective Field
03	02	Air Conditioning Mechanic	Matric + Relevant Technical Course	3-5 Years in Respective Field
04	02	Industrial Electrician	Matric + Relevant Technical Course	3-5 Years in Respective Field
05	02	Helper	Matric	2 Years in Respective Field

Total 09

Dated this \_\_\_\_\_ day of \_\_\_\_\_ 2018.

Signature \_\_\_\_\_

In the capacity of \_\_\_\_\_

duly authorized to sign tenders for and behalf of \_\_\_\_\_

\_\_\_\_\_  
 (Full Address) \_\_\_\_\_

Witness \_\_\_\_\_

Address \_\_\_\_\_

Occupation \_\_\_\_\_

**APPENDIX-2 TO TENDER**  
**SALARY OF OPERATION & MAINTENANCE STAFF FOR HVAC SYSTEM &**  
**ALLIED EQUIPMENT INSTALLED AT STATE LIFE BUILDING NO.3,**  
**THANDI SARAQ, HYDERABAD**  
**(TO BE FILLED BY BIDDERS)**

Note :- In addition to the Tender Terms & Conditions, Contractor shall adhere to the minimum wages as announced by Govt. of Pakistan, in case of failure.

S. NO	Quantity	Designation/ Name	Qualifications	Experience	Rate per person (Rs)	Total Rate (Rs)
01	01	Site Supervisor	D.A.E (Mech/ Airconditioning)	3-5 Years In Respective Field		
02	02	A.C Plant Operators	D.A.E (Mech/ Airconditioning)	3-5 Years in Respective Field		
03	02	Air Conditioning Mechanic	Matric +Relevant Technical Course	3-5 Years in Respective Field		
04	02	Industrial Electrician	Matric + Relevant Technical Course	3-5 Years in Respective Field		
05	02	Helper	Matric	02 Years in Respective Field		

## SECTION- 02

### INSTRUCTION TO BIDDERS

**1. ADDENDA:**

Addenda may be issued, prior to the date set for submission of tenders, to clarify the tender documents or to effect modifications in the contract terms or scope of work. Every addendum issued will be distributed on equal opportunity basis and shall become a part of the tender documents.

**2. DOCUMENTS TO BE SUBMITTED WITH TENDER AND GENERAL CONDITIONS APPLICABLE TO TENDER:**

- A) The tenderer is required to complete/ submit the following with his tender:
- i. Form of Tender and Memorandum.
  - ii. Schedule of price.
  - iii. Appendix-1 & Appendix-2.
  - iv. Tenderer's constitution.
  - v. Proposed organization chart.
  - vi. Proposed methodology for the Operation, Maintenance and servicing of complete plants and allied equipment as per the scope of work and other conditions detailed in the tender documents.
  - vii. Tenderer's official address.
  - viii. Bid security.
- B) The Tenderer shall not make any alteration in the form of devised tender documents.
- C) The Tenders shall keep his bid/ offer firm and final in all respects and open for acceptance for the period stated in the memorandum.
- D) Tenders which are incomplete, conditional obscure or containing uncalled additions. Erasers, alterations, over writings or irregularities may be rejected/Disqualified.
- E) The Tenderer must submit to the Employers' Representative the tender documents on or before the tender due date.

### **3. SUBMISSION OF TENDER:**

The set of complete tender document and addenda addressed to Incharge (Real Estate) 7<sup>th</sup> State Life Building, Thandi Sarak, Hyderabad, must be delivered in person or sent registered mail and endorsed on the outside with the words "Tender for" in plain sealed in an envelope due on \_\_\_\_\_ at \_\_\_\_\_ so as to reach up to on \_\_\_\_\_ and the tenders will be opened at same place on the same day in the presence of those tenderrers who may be present at the time of tender opening.

### **4. BID SECURITY:**

- a) In order to secure the due performance by the Tenderer of the obligations undertaken by him, the tender must be accompanied by bid security as mentioned in the memorandum of the tender.
- b) Bid Security must be made in the form of pay order/ bank draft/Bankers cheque of a scheduled bank of Pakistan in favor of the employer i.e. State Life Insurance Corporation of Pakistan.
- c) Tender will not be considered unless it is so secured. This bid security shall be refunded to the tenderrers whose tender are not accepted, on acceptance of the tender or award of such work to the lowest bidder.
- d) The bid security provided by the tenderer whose tender is accepted shall be retained by the State Life for full period of contract as performance guarantee.
- e) If the tenderer whose tender is accepted fails to execute the formal Contract Agreement at his own expenses within fifteen days of being requested to do so, the full amount of his bid security shall stand forfeited, without recourse, and shall be the absolute property of the employer.

### **5. FORMAL CONTRACT & PERFORMANCE BOND:**

The Bidder whose tender is accepted will be required to enter into a contract agreement in accordance with the conditions of contract.

### **6. VISIT TO SITE:**

The Bidder should visit the site and satisfy themselves as to local conditions and occupation of the buildings, the full extent and nature of the operations, the conditions affecting the execution of the work and execution of the contract generally. Claims on the grounds of want of knowledge in such respect or otherwise shall not be admitted.

**7. CONSTITUTION OF ORGANIZATION TENDERING:**

- a) The Bidder must deliver to the employer with his tender, copies naturally authenticated of the documents defining the constitution of the company or firm by which the tender is submitted, so as to show by what persons and in what manner a contract may be entered into by the company or firm and what persons would be directly responsible for the due performance of the contract and can give valid receipt on behalf of the company or firm. The tender shall be signed only by such persons.
- b) Any correction or alteration in the tender must be signed in full by the same person who is signing the tender for and on behalf of the Bidder.
- c) Tender must be signed or sealed or otherwise executed in such a manner that it will be binding on the Bidder. Tenders not so executed may be rejected.

**8. BIDDER ADDRESS TO BE SUPPLIED:**

The Bidder must give with his tender the address at which notice may validly be served on him.

**9. ACCEPTENCE:**

Promptly after opening of the tenders, the employer will undertake a detailed study and appraisal of the tenders submitted. The employer does not bind himself to award the contract to the lowest or to any Bidder but will take into careful consideration the Bidder price and such other factors as are deemed to be applicable. Once the employer has arrived at a decision regarding the award of the contract, successful bidder will be informed in writing of the employer's intent to enter into a contract for the performance of the works. The successful bidder will be required to attend the office of the employer's representative within specific time as mentioned clause-(e) of memorandum.

**10. TAKING OVER OF PLANTS, EQUIPMENT AND SYSTEMS AND COMMENCEMENT OF WORK:**

- a) The proposed strategy for taking over of the plants, and commencement of work is as under;

The contractor shall commence mobilization of his staff and stores within 07 (Seven) days of the issuance of letter of award of work and submit the list of proposed staff for approval by the employer's representative. The contractor will immediately arrange suitable replacement for the staff not approved by the employer's representative.

- b) On direction by the employers' representative, the present contractor will commence having handling over of the plants to the contractor and start demobilization of his staff on mobilization of contractor's staff. Proper detailed lists of plants shall be prepared for record of "Taking Over" / "Handing Over" signed by both contractor's representative and employer's representative, the contractor ensuring that the taking over is completed with 10 days of the issuance of letter of award of work.
- c) The contractor shall coordinate his mobilization plan including taking over of the plants with the demobilization plan of the present contractor and ensure that the smooth operation and maintenance of the plants is not effected in any manner during this transition period.
- d) The aforementioned transition period is intended to facilitate the contractor to make himself fully conversant with operation, maintenance and servicing of the plants so that no interruption is caused when the present contractor has completely demobilized. The full staff strength shall become available at site before the end of the transition period.

**11. RIGHTS:**

The employer reserves the right to reject any or all tenders as per PPRA rules/ regulation.

## SECTION -03

### CONDITIONS OF CONTRACT

#### **1. DEFINITION AND INTERPRETATION:**

- a) In construing the contract, these conditions, other documents and the interpretations, the following words and expressions shall have the meaning herein assigned to them, except where the subject or context otherwise requires.
- b) "Employer" / "Owner" means State Life Insurance Corporation of Pakistan (SLIC) and shall include their administrative and legal representative assigns or successors.
- c) "Employer's Representative" means the representative of the State Life Insurance Corporation of Pakistan or such other person(s) for the time being or from time to time duly appointed by the Employer to perform the duties set forth in clause-7(a) hereof and notified in writing to the contractor.
- d) "Contractor" means the tenderer/bidder whose tender bid has been accepted by the Employer and shall include his legal and personal representative(s), successors and permitted assigns.
- e) "Contractor's Agents" means the person or site engineer duly appointed by the contractor and approved by the Employer's Representative to perform the duties set forth in clauses-7 & 8 hereof.
- f) "Contract" means the agreement contained in the contract agreement and the documents set out in the contract Agreement as forming part thereof.
- g) "Bid price" means the total Bid price of all material, manpower for operation, maintenance, servicing, overhauling, supervision and services required for the works and all cost in connection with fulfillment of all conditions and performances under the contract.
- h) "Plants" means all the operation, maintenance, servicing and overhauling works to be executed in accordance with the contract and includes the whole of the works, materials, matters and things required to be done, furnished and performed by the contractor under the contract.
- i) "Works" means all the plants, equipment and system as detailed in these documents for which the work is to be executed by the contractor.
- j) "Site/ Building" means the building wherein the works are to be performed and executed by the contractor.



- k) "Specifications" means the specifications provided in the operation and maintenance manuals, directive by Employee's representative and other documents relating to the plants, allied equipment and systems installed in the building.
- l) "Drawings" means the drawing referred to in the operation and maintenance manuals etc, and any other drawings including As-built pertaining to the plants, allied equipments and system installed in the building.
- m) "Tender Date" means the date by which the tender/ bid is required to be delivered to the employer.
- n) "State Laws" has the meaning assigned in clause-10 hereof.
- o) "Approved" means approved in writing including subsequent written confirmation of previous oral approval and "Approval" means approval in writing including such written confirmation.
- p) "Notice in writing" has meaning assigned in clause-19 hereof.
- q) "Month" means a calendar month.
- r) The singular includes the plural and vice versa. The masculine includes the feminine vice versa. Words importing persons include firms, companies or other bodies corporate.

**2. EXTENT OF CONTRACT:**

- a) The contract comprises of the operation, maintenance, servicing and overhauling of the complete plants, Allied equipment and systems as detailed elsewhere in the contract documents. Any additional works other than above requiring additional manpower at site will be paid at 20% overhead profit on production or of original invoices of the material/ parts if not supplied, by state life.
- b) And except in so far as the contract otherwise provides the provision of all labor, materials, tools instruments and everything whether of incidental nature required in and for operation, maintenance, servicing and overhauling of the complete plants, equipment and systems, so far as the necessity for providing the same is specified in or can reasonably be inferred from the contract.

**3. ASSIGNMENT AND SUB-LETTING:**

- a) The contractor shall not assign the whole of the contract or any part thereof or any benefit or interest therein or there under without the prior written consent of the employer.
- b) The contractor shall not sub-let the whole or any part of the contract without the prior written consent of the employer.

**4. CONTRACT DOCUMENTS:**

- a) The contract shall be read, construed and interpreted according to the English language and shall operate in conformity with the laws of the Islamic republic of Pakistan.
- b) Except if and to extent otherwise provided by the contract the provisions of these conditions of contract shall prevail over those of any other documents forming part of the contract. Subject to the foregoing the several documents forming the contract are to be taken as mutually explanatory of one another but in case of ambiguities or discrepancies the same shall be explained and adjusted by the Employer's representative who shall there upon issue to the contractor instruction directing in what manner the work is to be carried out.
- c) None of the documents herein before mentioned shall be used by either of the parties here to for any purpose other than the contract and neither the Employer nor the contractor shall divulge or use except for the purpose of this contract any information in the priced schedule of prices.

**5. GENERAL OBLIGATIONS:**

- a) The contractor shall when called on to do so enter into and execute a contract agreement in the form annexed with such modifications as may be approved by the Employer.
- b) The contractor shall provided a surety or sureties approved by the Employer to be jointly and severally bound with the contractor to the Employer for the due performance of the contract by the contractor under the terms of a performance bond, specimen annexed and approved by the employer in the amount specified in the memorandum of the tender.
- c) The contractor shall be deemed to have satisfied himself before Bidding as to the correctness and sufficiency of his tender and the rate and price shall except in so far as it is otherwise expressly provided in the contract cover all his obligation under the contract and all matters and things necessary for the proper execution of the works.

- d) The contractor shall execute the works in strict accordance with the contract to the satisfaction of the employer's representative and the whole of the labor, materials, tools and instruments, other things to be provided by the contractor pursuant to the contract and the mode, manner and speed of execution of the works are to be of a kind and conducted in a manner to the satisfaction of the employer's representative.
- e) The contractor shall comply and adhere strictly to the employer's representative's instructions and direction on any matter (whether mentioned in the contract or not) touching or concerning the works. The contractor shall take instructions and directions only from the employer's representative or from the Engineer of SLIC Pakistan.

**6. POWERS OF THE EMPLOYER'S REPRESENTATIVE:**

- a) The contractor shall carry out the works under the directions of the Employer's Representative and to his satisfaction.
- b) The employer's representative decision in respect of materials and workmanship and interpretation of the specifications will be final and shall be accepted by the contractor. Any other matters may be referred to arbitration by the contractor if he wishes to dispute the employer's representative decision upon such matters.
- c) The employer's representative may from time to time give further instruction and direction as may be necessary for the guidance of the contractor and the proper execution of the works. The employer's representative may later the form or character of any of the work in the contract or omit or add to the works.
- d) If any verbal instruction, direction or explanation involving a variation are given to be contractor or his agent upon the works by the employer's representative, such instruction, direction or explanations shall be confirmed in writing by the contractor to the employer's representative within the seven days and, if not dissented from in writing by the employer's representative to the contractor within a further seven days, shall be deemed to be the employer's representative's instruction.
- e) If compliance with the employer's representative's instruction involve the contractor in loss or expense beyond that provided for in or reasonably contemplated by the contract, then, unless such instruction were issued by reason of some breach of the contract by the contractor, the amount of such loss or expense shall be ascertained by the employer's representative and shall be paid to the contractor.

- f) If within seven days after receipt of a written notice from the employer's representative requiring compliance with the employer's representative's instruction, the contractor does not comply therewith, the employer may employ and pay other persons to execute any work whatsoever which may be necessary to give effect to such instruction and all costs incurred in connection therewith shall be recoverable from the contractor by the employer as a debt or may be deducted by him from any monies due or to become due to the contractor under the contract.
- g) Such variations, omissions or additions resulting from instruction of the employer's representative will not vitiate the contract and will be the subject of adjustment to the contract price if it is the cause of any difference in expense.
- h) The employer's representative will have the power to withhold the issue of any certificate for monthly or other payments if the works are not being carried out to his satisfaction.
- j) In devaluing deciding or certifying the employer's representative is not intended to act as an arbitrator, but as an engineer acts by his skill and from his knowledge of the facts and includes connected with the contract and in so far as any facts are not within his own knowledge, the employer's representative shall be liberty to inform himself by inquiry of any other person or as he may consider necessary. The employer's representative shall at all times be considered to be aware of all facts necessary for him to inform his own opinion, make his evaluation, give decisions and order, make his requisitions or give or refuse his certificate and he shall be at liberty to certify at such times and in such manner as in discretion he may think proper and shall not be bound to give any reason for or any particulars of his certificate or any reason for his certifying.

**7. CONTRACTOR'S SUPERINTENDENCE, AGENT AND EMPLOYEES:**

- a) The contract shall give or provide all necessary superintendence for the proper fulfilling of the contractor's obligations under the contract.
- b) A competent and duly authorized agent (site supervisor) of the contractor approved by the employer's representative (which approval may at any time be withdrawn) and who shall have full authority to act for and bind the contractor is to be constantly at the site of work and shall give his whole time to the superintendence of the work.
- c) The agent shall receive on behalf of the contractor directions and instructions from the employer's representative.
- d) Correspondence between the contractor or the agent and the employer's representative shall be in English.

- e) The contractor shall provided and employ on the site for the purpose of or in connection with contract.
- i. Only such engineers supervisors, foreman, technical assistance as are skilled and experienced in their respective fields and are competent to give proper supervision to the work they are required to supervise, and
  - ii. Such skilled, semi-skilled and unskilled labor as in necessary for the proper and timely performance of the contract.
- f) The employer's representative shall be at liberty to object to and require the contractor to remove the forewith from the site agents or any other person employed by the contractor or any sub-contractor who in the opinion of the employer's representative mis-conduct himself or is incompetent or negligent in the proper performance of his duties or whose employment is otherwise considered by the employer's representative to be undesirable and such person shall not be again employed for the purpose of or in connection with the contract without the written permission of the employer's representative. Any person so removed shall be replaced immediately by a competent substitute approved by the employer's representative. No action as aforesaid in this clause taken by employer of the employer's representative shall relieve the contractor of any of his liabilities under the contract or give rise to any right to compensation or to any other claim.
- g) For the purpose of identification and security, all employees of the contractor, who may be, from time to time, detailed to work within the premises of the building, in connection with rendering of the agreed services as per connected contract agreement;
- i. Shall be issued with proper identity cards by the contractor duly countersigned by the employer's representative.
  - ii. All employees working in the building shall wear proper uniforms (with firm's name label thereon) provided by the contractor. The employee's identity card of the contractor shall display the I.D card pinned with uniform.
- h) The contractor shall submit to the Employer's representative certified photocopies of National identity cards of all employees employed by him for performance of the services under this contract.
- i) The contractor shall submit medical fitness certificates of all employees employed by him for performance of service under this contract.
- j) The contractor shall maintain daily attendance register of his employees and workers engaged in providing operation, servicing and maintenance service & overhauling works. This attendance register shall be submitted each day to the employer's representative

and the same may be subject to verification by physical head count. The object of providing attendance record to the employer's representative is to enable him to monitor that the required work force of to contractor is available to provide effective and satisfactory operation, maintenance, servicing and overhauling services.

**8. WATCH AND CARE OF WORKS:**

- a) Except as otherwise specifically provided in the contract the contractor shall make all arrangements for the security and protection of persons and property or for the safety.
- b) For the duration of the contract, the contractor shall take full responsibility for the care of complete plants, equipment and system (work) materials, tools instruction, and other thing brought on the site by the contractor for the purposes of the contract and in case any damage loss or injury shall happen to the works or any such materials or tools or instruments or other things from any cause whatsoever (save and except the expected risk e.g. outbreak of war or act of invasion) he shall at his own cost replace, repair, and make good the loss or damage so that the complete plants, equipment and systems are restored to the original condition in conformity in every respect with the requirements of the contract and the employer's representative instructions. In the event of any such damage loss or injury happening from any of the excepted risks the contractor shall, if and to extent required by the employer's representative, replace, repair and make good the same as aforesaid at the cost of the employer.
- c) The contractor shall indemnify and keep indemnified the employer against all losses and claims for injuries or damages to any person or any property whatsoever which may arise out or in consequence of the performance of the contract and against all claims, demands, proceeding, damages, costs, charges and expenses, whatsoever in respect of or in relation thereto.

**9. PROTECTION OF WORKS AND MATERIALS:**

- a) The contractor shall be responsible for any damage caused by his workers, operatives or agents to the building, complete plants , equipment and systems, works being executed under this contract, or the contents of the building, and shall make good such damage at his sole expense.
- B Any damage(s) as may occur through negligence of the contractor his agents or employees will corrected and / or made good at his own expense.

## **10. COMPLIANCE WITH STATUES REGULATIONS ETC:**

The contractor shall confirm in all respects rules with the provisions of all federal, provincial and local laws, rules, regulations or orders or other laws for the time being in force in Pakistan including all regulations and by-laws, if any, of local or other duly constituted authority within Islamic republic of Pakistan which may be applicable to the performance of the contract and the rules and regulations of all public bodies and companies whose property or rights are affected in any way by the works (which are herein referred to as "State Law") and shall give all notices and pay all fees, charges, rates, and taxes (collectively referred herein as fees) required to be given or paid thereby and shall keep the employer indemnified against all penalties and liabilities of any kind for the breach of any of the same provided that such fees shall be reimbursed by the employer to the contractor on demand.

## **11. INSTRUMENTS AND TOOLS:**

The contractor shall supply and maintain such sufficient instruments, tools and equipment, for the use of his staff that are required to enable him to fulfill his obligations under the contract.

## **12. LABORERS/ WORKERS:**

- a) The contractor shall make all arrangements in connection with the recruitment, supervision, transport, accommodations, quarantine and all other matters whatsoever in connection with the employment of laborers and supervisory staff provided that the contractor shall not recruit or attempt to recruit persons in the service of the employer.
- b) The contractor shall at all times take all requisite precautions and his best endeavors to prevent any riotous or unlawful behavior by or amongst the laborers and other employed by him or his sub-contractors for the purpose of or in connection with the contract and for the preservation of the peace and the protection of the inhabitants and the security of property on or in the neighborhood of the site.
- c) In all respects of all laborers directly or indirectly employed by the contractor for the performance of the works, he shall comply with or cause to be compiled with, all rules framed by the federal and provincial governments and any local body from time to time for the employment of labor including the protection of health and sanitary arrangements for the workers.
- d) The contractor shall maintain at site proper attendance registers to record the attendance of his employees and submit a return in detail at the end of every week to the employer's representative showings.

- i. The numbers of several classes of labor employed by him on the works during the period.
  - ii. Their working hours, and
  - iii. Details of any accidents during the period indicating extent of damage and injury.
- e) The contractor's agent shall show the attendance registers to the employer's representative whenever called upon to do so.

### **13. FACTORY ACTS & LABOR LAWS:**

The contractor shall, in relation to the works to be executed under this contract, comply with the provisions of the Factories Act 1937 and 1984 and west Pakistan industrial and commercial employment (standing orders) ordinance 1968, and other Federal and Provincial laws concerning employment of workers, and statutory amendments or additions thereof, and any regulations or orders made there under affecting the works.

### **14. BILLS, CERTIFICATES AND PAYMENTS:**

- a) The contractor shall submit his bills to Employer's Representative during 1<sup>st</sup> week of every month carried out during the proceeding month and the contractor shall be paid monthly on the certificate of the Employer's Representative.
- b) The Employer's Representative shall have the power to make necessary adjustment in the bill and issue his certificate within a week of the receipt of the bill by him.
- c) The contractor shall submit his bills in the prescribed form duly approved by the Employer's Representative.
- d) The Employer's Representative may make any correction or modification in any previous certificates which shall have been issued by him and shall have power to withhold any certificates if the works or any parts thereof are not being carried out to this satisfaction.
- e) No claim from the contractor on account of fluctuation in the market rates shall be entertained during the currency of this contract agreement for any item of work executed under this contract.
- f) The amount due to the contractor under any certificate issued by the Employer's Representative shall be paid by the employer to the contractor within 28 days after such certificates has been delivered to the employer.



**15. DEDUCTION OF AMOUNT FROM MONTHLY BILL:**

- a) Lump sum amount accessed by the Employer's Representative in case of un-satisfactory service provided by contract.
- b) 1.5 times amount / worker will be deducted in case of absence of contractor's staff. Salary in the light of details gives in price schedule of required employees [only one (01) day leave will be allowed to each worker of contractor in each calendar month].
- c) 1.5 times of salary of contractor's staff will be deducted in case of shortage of staff as per salary / price schedule submitted by contract.
- d) Frequent shortage/ absence of contractor's staff will invite penalty that is absolutely at discretion of Employer's Representative.

**16. TAXES:**

- a) The contractor shall be responsible for the payments of all Pakistani taxes i.e. Income Tax, super tax, SST (SRB) etc, on income arising out of the contract and the rate/ price stated in the tender and schedule of prices shall be deemed to cover all such taxes.
- b) The contractor shall pay directly royalties, rent and other payment or compensation (if any) for getting any materials, plant, equipment, tools and instruments etc, required for the works.
- c) Any element of federal, provincial or local duty or tax inherent in the price of locally procured items required for the work shall be deemed to be included in the rates and prices stated in the priced tender and schedule of price and will not be separately reimbursable.

**17. INSURANCE:**

The contractor shall furnish the following insurance policies to the employer within 15 days of the issuance of letter of award of work. The contractor must keep the policies in force during the entire contract period and produce to the Employer's Representative the receipt for payment of the premiums:

- i. Workmen's compensation policy based on the total wages / salary and to that limit required by the law of Pakistan for the workers and other persons in the employment of the contractor.
- ii. Third party liability policy up to limits specified in memorandum of the tender.

**18. SPECIAL OBLIGATION OF THE CONTRACTOR:**

- a) The contractor is bound to pay the salaries to his workers/ employees employed for the works regularly within 1<sup>st</sup> week of each month positively. If the contractor fails to make payments to his workers/ employees by 7<sup>th</sup> of each month of the Employer's Representative may on receipt of such written complaint from the workers/ employees pay the salaries to the workers/ employees of the contractor and the amount so incurred by the Employer's Representative, shall be deducted from the bill of the contractor. If the contractor is late in making payments to his workers / employees for any two consecutive months, the Employer's Representative may terminate this contract in terms of clause 20(iii) herein.
- b) The contractor shall issue liaise and co-ordinate with the other contractors working at the site so that the performance of his and other contractor's work is not affected in any way. If any dispute and difference arises between the contractors working at the site, the same shall be referred to the Employer's Representative in writing, whose decision shall be treated final, conclusive and binding on all the parties.
- c) The contractor shall be responsible and shall make good any loss, damage, theft and pilferage during the period his employees are working in the premises of the building and for which their responsibility is proved.
- d) The contractor shall sign the inventory for all plants, equipment, fitting and fixtures etc. any loss or damage to any plants, equipment, fittings and fixtures etc. shall be the responsibility of the contractor.
- e) The contractor shall ensure that the manpower once provided for the works would not be ordinarily changed from the site.
- f) The contractor shall make himself available to the Employer's Representative whenever asked for and shall reply all communications issued within two days of their receipt.

**19. NOTICES:**

- a) Any notice to be given to the contractor under the terms of the contract shall be served by sending the same by registered post to or delivering the same at the contractor's office/ address.
- b) Any notice to be given to the employer under the terms of the contract shall be served by sending the same by registered post to or delivering the same at the Employer's principal office.

- c) Any notice to be given to the Employer's Representative under the terms of the contract shall be served by sending at the same by registered post to or delivering the same at the Employer's principal office.

## **20. TERMINATION:**

- a) The employer shall have the right to terminate the contract wholly or partly by giving a notice of 30 (thirty) days to the contractor:
  - i. In the opinion of the Employer's Representative the contractor's performance is unsatisfactory.

OR
  - ii. The contractor fails to abide by any of the conditions of the contract or the instructions of the Employer's Representative.

OR
  - iii. The contractor fails to fulfill his obligations regarding payment of salaries to his workers/employees as mentioned in clause-18(a) herein.
- b) The employer shall also have the right to terminate the contract by giving a notice of 30 (thirty) days if he decides to discontinue the services of the contractor due to any reasons other than those mentioned above. However, in such a case the employers shall not invoke/ forfeit the performance bond of the contractor and shall make a fair assessment of the payments due to the contractor and release the same in full and final settlement of the accounts under the contract.

## **21. FORCE MAJEURE:**

Any delay in or failure of performance of contractor or in fulfillment of any obligation by the employer hereto shall not constitute default hereunder or give rise to any claim for damages if and to the extent such delay or failure of performance is caused by occurrence beyond the control of the party affected including natural calamities, acts of war, rebellion or sabotage or damage resulting there from, fire or explosions, accidents, breakdown, riots, commotion, strikes (excluding the strike of the employees of the contractor) epidemic or any other causes whether or not of the same class or kind as those specifically stated above, which are not within the control of the party affected and which by the exercise of reasonable diligence the party affected is unable to prevent.

## **22. SETTLEMENT OF DISPUTES:**

- a) All questions and disputes between the parties to the contract other than those in which the decision certificates and / or opinion of any person is expressed by the contract to be final and conclusive, shall be referred to the arbitration and final decision of a single arbitrator agreed and appointed by both the parties.
- b) The arbitrator, shall have power to open up, review and revise any certificate, opinion, decision, requisition or notice in regard to the accepted matters referred in clause-g of memorandum hereof, and to determine all matters in dispute which shall be submitted

to him or them and which notice shall have been given, and his/ their award shall be final, conclusive and binding on the parties.

- c) Unless the parties otherwise agree such reference shall not take place until after the substantial completion or abandonment of the works or determination of the contract.
- d) The provisions of Arbitration Act 1940 and any statutory modification thereof and rules framed there under shall be deemed to apply to and be incorporated in this contract.
- e) The cost of every reference and award respectively shall be in the discretion of the arbitrator, who shall determine the amount thereof, and shall direct by whom and in what manner the same shall be borne or paid.
- f) Reference to the employer arbitration shall be made on writing by the contractor specifying clearly all such question and dispute not later than three months after the completion of the works. Failure to make such a reference shall be deemed that the contractor has waived all claims in this respect. The parties shall appoint the arbitrator within two months of such reference being made.
- g) The employers and the contractor hereby also agree that arbitration under this clause shall be condition precedent to any other action at law. The venue of arbitration any other action shall be Hyderabad/Karachi.

## **SECTION-04**

### **GENERAL REQUIREMENTS**

1. The contract shall be awarded for a period of one (1) year and further two (2) years extendable subject to the mutual consent at inflation rate announced by state Bank for last year only.
2. The Employer will facilitate the working of the contractor by providing adequate facility particularly a suitable office for the contractor's Site Engineer within or close to the central plant room with a telephone extension from the existing intercom system during working hours for easy communication by the contractor's supervisor engineer with the Employer's Representative.
3. The contractor will operate the Air-Conditioning Plants, Allied equipment and systems (hereinafter collectively referred as the plants), providing effective Air-Conditioning in the Building and satisfactory operation of all equipment. Working hours (Monday to Saturday) of plants shall be as follows;

❖ **Monday to Saturday**

**from 8:30 A.M to 5:30 P.M**

Note: The timing for operation are subject to change on discretion of In charge R.E or Building Incharge.

On Saturday the contractor's staff will attend and carry out the required servicing, maintenance and repair works for the equipment. The Employer's Representative may give prior instruction to operate any specific equipment.

The plants will not normally be operated on Sundays and listed public holidays.

**4.**

- a) The contractor will operate the plants on year-round basis, the periods of cooling-ventilation would depend on the weather conditions which decision will be at the discretion of the Employer's Representative.
- b) The normal servicing, maintenance, repairs and overhauling of the plants shall be carried out in a manner that the normal operation of the plants is not disrupted.
- c) Normally the cooling cycle shall not be operated during November 15 to March 15 every year and the contractor must complete the work of annual servicing, maintenance, overhauling and repairs during this period so that the plants are in full working order by March 15.

5.

- a) The contractor will be required to physically check the engineering stores of the Employer to determine the availability of imported and indigenous spare parts.
- b) The contractor will submit a complete list of spare parts and materials required for the operation, maintenance and servicing of the plants and for the annual servicing, maintenance, overhauling and repairs to the Employer's Representative as per following time schedule.
- c) The contractor shall give following minimum time notice to the Employer's Representative for procurement of spare parts and materials.
  - i. 04 months time for imported spare parts and materials.
  - ii. 02 months time for locally available spare parts and materials.
- d) In case the Employer's Representative instructs the contractor to supply any item to be procured from the local market, the contractor will be paid (twenty percent) 20% of the cost of the item as handling and overhead charges to cover the procurement expenses. The Bill of the contractor will be supported by the cash memos or bills of the suppliers for the items purchased and supplied by the Contractor.

6.

- a) The contractors shall be depute experienced and qualified staff for the operation, servicing and maintenance of the plants who will work exclusively in the Building and shall not be diverted to the contractor's other installation(s) while operation, servicing, maintenance, minor repairs and overhauling of the plants is carried out. The staff must remain at the site of work during their working hours and should have required qualifications and experience in their respective trades.
- b) The contractor shall depute additional staff as required from his central workshop for carrying out the work of servicing, maintenance and minor repairs, particularly annual servicing, maintenance and overhauling.
- c) The contractors shall prepare log sheets for daily recording the observations of the operation of the plants, testing of water samples and temperatures in the occupied/conditional areas of the building, etc. and submit the same to the Employer's Representative for scrutiny, amendment and approval. Contractor's site supervisor shall ensure that the approved log sheets are accurately maintained and take confirmatory signatures of the Employer's Representative every day. Two sets shall be prepared and one set handed over to the Employer's Representative every day.

**d) THE CONTRACTOR SHALL PREPARE:**

- i. Schedule of routine servicing and maintenance, and
- ii. Schedule of annual servicing, maintenance and overhauling, and submit the same to the Employee's Representative for scrutiny, amendment and approval in October each year.

The contractor shall maintain a Register in the form of Charts for each Equipment and system and record with dates the work of servicing, maintenance and overhauling as carried out. The contractor shall take confirmatory signatures from Employer's Representative for the work done.

- e) The contractor shall arrange periodic site visits, at least once in the last week of every month, of his Senior Engineer from his head office to check the operation of the plants and servicing, maintenance, minor repairs and overhauling work carried out by the contractor's staff. The contractor will submit the inspection reports of his senior engineer to the Employer's Representative in first week of every month for the proceeding month. The report shall highlight the overall performance of the plants and pinpoint any actions to be taken by the Employer's Representative.

- f) Section-6(a) & (b) of tender documents, list of operation & maintenance staff, specifies the minimum full time staff (along with qualifications & experience) to be employed by the contractor at site.

The contractor must employ sufficient staff to satisfactorily fulfill his obligations under the contract. Replacement staff shall be immediately arranged by the contractor if any staff cannot attend the duties.

**7.**

- a) The contractor must ensure regular attendance of the approved staff for the work and maintain an Attendance register for the staff and take signature from the Employer's Representative every day.
- b) Replacement staff shall be immediately arranged by the contractor if any staff cannot attend his duties. The bio-data of replacement staff shall be immediately submitted to the Employer's Representative for approval.

- 8.**
- a) The contractor shall ensure that the spare parts etc. are replaced only when it is considered essential. Maximum care shall exercised for economy and all efforts should be made to repair the old part.  
New part should only be substituted when the old part cannot be satisfactorily repaired.
  - b) The contractor shall hand over the defective part to the Employee's Representative. The contractor shall maintain a register to record the new parts taken from employer's store and defective parts handed back and take confirmatory signature from the Employee's Representative against each entry.
- 9.** The contractor may carry out the regular servicing and maintenance work on holidays to avoid interruption to regular operation of the plants. The contractor's supervisor/ engineer shall inform the Employee's Representative on a Wednesday (or 02 days before the holidays) regarding the servicing and maintenance work to be carried out on next holiday so that the Employee's Representative can arrange necessary security and access for the contractor's staff.
- 10.** In case any equipment or parts of the plants are damaged or destroyed as a result of negligence on the part of the contractor, his agent or employees, the contractor shall be liable to pay for rectification and making good of all such damages or losses.
- 11.** The Employer reserves the right to make deduction for the periods of interrupted operation of the plants on pro-rata basis where the cause of interruption is attributable to the negligence of the contractor, his agent or employees, of which the employer shall be the sloe judge.
- 12.** The contractor must ensure good behavior by his staff and the contractor's site engineer should liaison with and follows the instruction of the Employer's Representative, particularly regarding the entry of the contractor's staff to the building occupied areas.
- 13.**
- a) The Employer's Representative may instruct the contractor's site supervisor to operate the plants:
    - i. Beyond normal hours on a working day, or
    - ii. On a Sunday or public holiday by giving notice. Contractor's site supervisor will take certificate in writing from the Employer's Representative regarding the date and the period of the additional operation.



- b) The contractor shall be paid charges for the additional operation of the plants as provided in the contract.

**14.** Section-7 of tender documents, list of air-conditioning plants and allied equipment and list of tools & instruments, briefly details the main items of the plants without limitation. It is to be noted that the plants are complete in all respects with all accessories and controls and the bidder should visit the site and familiarize himself with the installation before submitting his tender.

**15. MAJOR REPAIRS:**

- a) In case any major repairs become necessary to the plants in normal course of operation but not due to any negligence or default of the contractor, his agent or employees of which the employer shall be the sole judge, the contractor shall immediately inform the Employer's Representative about such requirement and the employer will invite quotations for the work of major repairs from different bidder.
- b) If the work of any major repairs is awarded to the contractor, he shall depute additional staff from his workshop to carry out his work.
- c) If the work of any major repairs is awarded to any other contractor(s) by the employer, the site engineers of the contractor (thru operators designated for such equipment) shall constantly watch the work of such other contractors and provide necessary information for the guidance of such other contractors and make log book entries about the defects rectified and repairs/ replacement work carried out by such other contractors and record the progress of repairs/ replacement work.

The contractor shall not be required to lend any tools, etc. and make any labor available to such letter contractors for their work.

**16.** The contractor must ensure the proper functioning of the plants. In case of unsatisfactory functioning or failure of the plants on accounts of negligence of the contractor, of which the employer shall be the sole judge, the employer shall have the right to terminate this Agreement by giving a written notice of contradictory (clause-20) 30 (thirty) days. This is without prejudice to any other rights which the employer may have against the contractor under the terms of the contract.

## **SECTION-05**

### **SCOPE OF WORK**

1. The contractor shall be responsible for the operation of the complete Air-Conditioning plants, Allied equipment and system including automatic and safety controls, components and accessories (collectively referred herein as the plants), complete servicing and maintenance of the plants including minor repairs, annual overhauling and servicing. Major repairs, when required, are not included in the scope of work.
2. **THE EMPLOYER SHALL BE RESPONSIBLE FOR THE FOLLOWING:**
  - a) Electricity and water supply.
  - b) Spares and materials, chemicals and paints required for operation, maintenance, servicing, minor repairs and overhauling excluding miscellaneous items detailed in clause-3(c).
  - c) Water treatment chemicals, refrigerants and special lubricants or oils.
  - d) Suitable working space for the contractor's staff to carry out minor repairs.
3. **THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE FOLLOWING:**
  - a) All staff required for the work and as listed elsewhere in the documents.
  - b) All tools, cleaning brushes, instruments and equipment required to carry out the work.
  - c) Supply of miscellaneous items required for work such as cotton waste, cloth and kerosene oil.
  - d) To keep the plant rooms and spaces, equipment rooms and spaces, adjoining passages and terraces clean and neat. Cleaning to be done every day.
4. The contractor shall ensure that the plants are operated, maintenance includes the works like fault detection & removal, replacement of parts, plugging of leakages, refrigerant charging, wiring, electric parts replacement etc and serviced efficiently to avoid breakdown during normal operation. The contractor shall also ensure economical consumption of the materials and spare parts supplied by the employer.
5. **THE CONTRACTOR SHALL:**
  - a) Record twice daily the temperatures on each floor at different locations designed by the Employer's Representative.
  - b) Record plants and equipments operational data at suitable intervals.

- c) Record all observations in printed log sheet approved by the Employer's Representative. Two sets to be prepared and one set supplied to the Employer's Representative every day.
6. Routine servicing and maintenance as required must be completed by the contractor's staff every day.
7. The operation and maintenance work to be carried out by the contractor is briefly detailed in clause-8, 9, 10 and 11 for reference only without any limitation.
- 8.
- a) The contractor's site supervisor and other supervising staff shall study manufacturer's technical catalogues for the plants and familiarize themselves with the operation, maintenance and servicing of the plants to ensure trouble free operation of the plants.
- b) The contractor/ contractor's site supervisor shall immediately report any malfunctioning of the plants to the Employer's Representative.
- c) The contractor's staff will attend promptly to complaints of malfunctioning of any HVAC system/ equipment and rectify the same on priority basis. A log book will be maintained to record the date and time of each complaint and date and time of its rectification.
- d) The contractor shall coordinate with the employers water supply services to ensure that sufficient make up water is available for the operation of HVAC plants.  
In case of unusual water requirements such as filling of the entire system, the contractor's site supervisor will inform the Employer's Representative at least 02 days in advance.
9. **PLANT OPERATION:**
- a) Check for the working of all electrical and mechanical components of the plants.
- b) Regular dosing of chemicals for effective treatment of cooling chilled water system. Taking of samples and testing with test kits and recording the results daily for city water supply and weekly for chilled water.  
Two sets of chemical treatment reports shall be prepared indicating the quantities of chemicals added and result of samples tested for each system. One set shall be supplied to the Employer's Representative every day.  
Complete chemicals analysis tests shall be arranged from a reputable laboratory in first week of every quarter. Two copies of Lab report shall be prepared, one copy supplied to Employer's Representative and 2<sup>nd</sup> copy to be kept in contractor's site office.
- c) Maintains the daily operation log sheets required as per clause-6(c) page-'30'.

- d) Any servicing or repairs required during the operation of the plants.

**10. Weekly/ fortnightly/ monthly servicing & maintenance:**

- a) Washing and cleaning of air filters.
- b) Flushing and cleaning of strainers in the water systems.
- c) Cleaning of air devices.
- d) Servicing of automatic and safety controls of the plants.
- e) Checking of oil and other lubricants levels and changing the same when required.
- f) Adjustment and lubrication/ greasing of bearing and glands.
- g) Checking of belt driven equipment and adjustment of belt tension and alignment.
- h) Checking and adjustment of all pressure and safety devices and controls.
- i) Periodic servicing of the plants including topping up of refrigerant.
- j) Checking and adjustment of all pressure and safety devices and controls.

**11. ANNUAL SERVICING, MAINTENANCE AND OVERHAULING:**

- a) The work to be carried out from November 15, to February 28/29 under the supervision of a senior engineer to be deputed by the contractor. Parts to be changed where necessary instructions given in the manufacturer's manuals to be allowed. Record of various checks and tests to be maintained for future reference.

Immediately on shut down of the plants for annual servicing, etc. the contractor shall open all components of the equipment and prepare a list of major repairs required within one week of the shut down. The opened equipment shall be shown to the Employer's Representative to check the list of major repairs prepared by the contractor.

**b)**

- i. Cleaning of gear boxes and changing of oil.
- ii. Cleaning and adjustment of fan blades.
- iii. Removing of scale on cooling tower fill checking and adjustment of fill levels.
- iv. Cleaning of louvers and meeting orifices.
- v. Cleaning of basin and sumps.

**c) WATER PUMP-MOTOR SETS:**

- i. General servicing
- ii. Adjustment of glands and bearings.

**d) AIR HANDLING UNITS:**

- i. Flushing and cleaning of fins' surfaces and water tubes of cooling coils.
- ii. Checking and adjustment of dampers.
- iii. Checking and adjustment of fan bearings.
- iv. Checking of belts alignment and tension and mounting bolts.

**e) FANS:**

- i. Cleaning fans.
- ii. Checking and adjustment of bearings.
- iii. Checking of belts alignments and tension and mounting bolts.

**f) AIR FILTERS:**

Cleaning and repair of air filter.

**g) ELECTRIC MOTORS:**

- i. General servicing.
- ii. Checking and tightening of wire connections.
- iii. Checking the earthling.
- iv. Checking the lubrication of bearings.
- v. Checking of motors winding insulation with a meggar.

**h) ELECTRIC CONTROL BOARDS:**

- i. Checking and servicing of all MCCBs, disconnect switches, fuses, contactors, starters, relays, overload cutouts and other safety devices, checking and cleaning of contact surfaces.
- ii. Tightening of wiring connections.

- iii. Checking of wiring insulation.
- iv. Checking of earthing.

**i) AIR DISTRIBUTION SYSTEM:**

- i. Cleaning of all air devices. Removal, cleaning and refixing of exceptionally dirty air devices.
- ii. Internal cleaning of air ducts as required and directed by the Employer's Representative. Cleaning is to be programmed to ensure internal cleaning of 25% air ducts every year.
- iii. Repair of exposed ducts, duct insulation, jacketing and covering.
- iv. Removal and re-fixing of false ceiling tiles as required by the contractor for carrying out his work. The contractor shall be responsible for any damage to the false ceiling framing and tiles, which will be caused due to his work.

**j) PIPING SYSTEM:**

- i. Cleaning and flushing of all piping system including chemical cleaning when required.
- ii. Servicing of all valves, strainers, specialties, etc.
- iii. Repair of insulation, jacketing and covering of all insulated piping.

**k) PAINTING:**

- i. Painting of all equipments, exposed ducting and piping, if the previous paint has been scratched or has deteriorated.
- ii. Painting of air devices is excluded and shall be considered a major repair work.

- l) Removal of damaged insulation (significant portions) of equipment, ducting and piping and replacement with new insulation, jacketing, covering, finishing and painting shall be considered a major repair work.**

**SECTION-06(a)**

**LIST OF MINIMUM OPERATION & MAINTENANCE STAFF**

Site Supervisor	D.A.E (Mech / Air Conditioning)	Minimum 06 years in Respective Field	01
A.C Plant Operators	-DO-	3-5 Years in Respective Field	02
Air Conditioning Mechanic	Matric + Relevant Technical Course	3-5 Years in Respective Field	02
Industrial Electrician	Matric + Relevant Technical Course	3-5 Years in Respective Field	02
Helper	Matric	2 Years in Respective Field	02
<b>Total</b>			<b>09 Nos.</b>

**NOTE:**

- The Contractor must ensure that work of servicing and maintenance is satisfactory and regularly completed, if necessary by extending the working hours of his staff or by deputing more staff for the work or by working on Sundays OR Holidays.

## **SECTION-06(b)**

### **REQUIRED QUALIFICATION AND EXPERIENCE OF OPERATION & MAINTENANCE STAFF**

#### **1. SITE SUPERVISOR:**

Must have a diploma of Associate Engineer in Mechanical / Air Conditioning & Refrigeration Technology with minimum 3-5 years experience in operation, maintenance, servicing, overhauling and repairs of 400 TR capacity and above Central Air Conditioning type plants.

Must have capability as independent charge of operation & maintenance work of Central Air Conditioning type plant.

#### **2. A.C PLANT OPERATOR:**

Must have passed Matric examination of secondary board of education and have a certificate in Air conditioning technology from a recognized technical institute and minimum 3-5 years experience in operation, maintenance, servicing, overhauling and repairs of plants according to duties to be assigned including central type air conditioning plants with absorption type water chillers of 400 TR capacity and above, air handling units, cooling towers, etc.

#### **3. AIR-CONDITIONING MECHANIC:**

Must have passed Matric examination of secondary board of education and have a certificate in air conditioning technology from a recognized technical institute and minimum 3-5 years experience in operation, maintenance, servicing, overhauling and repairs of plants according to duties to be assigned including central type air conditioning plants with absorption type water chillers of 400 TR capacity and above, air handling units, cooling towers, etc.

#### **4. INDUSTRIAL ELECTRICIAN:**

Must have passed Matriculation examination of secondary board of education and have an electrical wireman license and minimum 3-5 years experience in operation, maintenance, servicing and repairs of industrial electrical installation and equipment and electrical system and equipment of central type air conditioning plants including electric/ electronic automatic controls.

#### **5. HELPER:**

Must have passed Matriculation with 2 years relevant experience.



**SECTION-7**

**LIST OF AIR-CONDITIONING PLANTS & EQUIPMENT**

**INSTALLED AT STATE LIFE BUILDING # 3, THANDI SARA, HYDERABAD**

**(PHASE – I).**

<b>Sr. No.</b>	<b>Description</b>	<b>Capacity</b>	<b>Qty</b>
1	Air Cooled York reciprocating Chillers with Accessories Model No. YCAJ-76 – ST9	125.4 TR Each	02 Nos.
2	Air Cooled York Reciprocating Chillers with Accessories Model No. YEAJ-777 PX7	207 TR	01 No.
3	(i) Air Handling Units (York) (ii) Air Handling Units (York)	7.5 HP Each 5.0 HP Each	04 Nos. 06 Nos.
4.	(i) Air Handling Units (York) (ii) Air Handling Units (York) (Feeding 5 <sup>th</sup> Floor to 8 <sup>th</sup> Floor)	10 HP Each 20 HP Each	06 Nos. 02 Nos.
5	Chiller Water Pump with Motor & Starter KSB – ETA – 65 / 20 Head – 120 F1	15 HP Each	06 Nos.
6	(i) Exhaust Fan (Mehran) (ii) Exhaust Fan (Mehran) (iii) Exhaust Fan (Mehran)	05 HP Each 03 HP Each 02 HP	09 Nos. 02 Nos. 01 No.

## LIST OF AIR-CONDITIONING PLANTS & EQUIPMENT

INSTALLED AT STATE LIFE BUILDING # 3, HYDERABAD

### (PHASE – II)

Sr. No.	Description	Capacity	Qty
1	Air cooled York reciprocating Chillers with Accessories Model No. YEAJ-87-HU7	150 TR Each	02 Nos.
2	Air Handling Units: (i) 1.4.5.7 & 9 Model # 118 HDT ( Sabro ) RPM – 684 (ii) 2.6.8 & 10 Model # 118 HDT (Sabro) RPM – 720 (iii) 3.4.12 & 16 Model # 118 HDT (Sabro) RPM – 725 (iv) 11.13 & 15 Model # 118 HDT (Sabro) RPM – 720 (v) 17 Model # 218 HDT (Sabro) RPM – 819 (vi) 18 Model # 218 HDT (Sabro) RPM – 830	05 HP Each 05 HP Each 05 HP Each 7.5 HP Each 10 HP Each 10 HP Each	05 Nos. 04 Nos. 04 Nos. 03 Nos. 01 No. 01 No.
3	Chiller Water Pump with Motor & Starter KSB – ETA – 65/20 Head – 110 Ft.	20 HP Each	03 Nos.
4	Exhaust Fan: (i) (Type – Axil) RPM – 1440 – Car Parking Wing ‘A’ (ii) (Type – Axil) RPM – 1440 – Car Parking Wing ‘B’ (iii) (Type – Axil) RPM – 1440 - Bathroom	02 HP 02 HP 02 HP	01 No. 01 No. 01 No.
5	Split A.C Units (SABRO) (i) ES J24 – A4 (ii)Concordia W.E.Z (iii)AXG 24 A P K – W.  Window A.C (GENERAL)	24000BTU/ hr  - do -	03 Nos.  01 No.
6	Pump ( Complete set )  (i) Siemens Motor VOLT 400 / Model No. 1 LA4 – 207-244 (ii)Siemens Motor VOLT 400 / Model No. IL A3164 – 24490 (iii)KSB PUMPS ETA, 8026 / 200 F.T / WNO 14 – 4458 (iv)KSB PUMPS ETA, 65/20/ 180 Ft / WN 014 – 4456	50 HP  20 HP  525 IGPM 200 IGPM	02 Nos.  02 Nos.  02 Nos. 02 Nos.

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**LIST OF TOOLS & INSTRUMENTS REQUIRED FOR OPERATION & MAINTENANCE,SERVICING,OVERHAULING WORKS OF HVAC PLANT INSTALLED AT STATE LIFE BUILDING NO.3, THANDI SARA, HYDERABAD**

1.	Box Spanner. (Different Size).	2 Sets
2.	Ring Spanner. (Different Size).	2 Sets
3.	Fix Spanner. (Different Size).	2 Sets
4.	Philips Screw Driver. (Different Size).	1 Set
5.	Flat Screw Driver. (Different Size).	1 Set
6.	Plair Set (Grip, Nose, Long nose, Electric).	1 Set
7.	Wire Cutter.	01 No.
8.	Adjustable Wrench. (Different Size).	1 Set
9.	Pipe Wrench. (Different Size).	1 Set
10.	Gas Welding St (Oxy – Accetaline Plant). (Would be Provided as Site as when required).	1 Set
11.	Electric Arc Welding Plant. (With lead, holder).  (Would be Provided as Site as when required).	1 Set
12.	Magger. (Would be Provided as Site as when required).	01 No.
13.	Nitrogen Cylinder (With Gauge and Adopter).	1 Set
14.	Vacuum Pump (Double Stage).	1 Set
15.	Gauge Manifold (Imperial USA).	02 Sets
16.	Die Set ½” to 2” Dia.	1 Set
17.	Chisels. (Different Size).	1 Set
18.	Flairing Tools.	1 Set
19.	Swaging Tool.	1 Set

20.	Hammer. (Different Weight).	1 Set
21.	Claw Hammer.	01 No.
22.	Gun Hammer.	01 No.
23.	Greese Gun.	01 No.
24.	Dust Blower.	01 No.
25.	Hand Grinder.	01 No.
26.	Bench Vice.	01 No.
27.	Pipe Vice (With Stand).	01 No.
28.	Tong Tester (USA).	01 No.
29.	Drill Machine (Hammering), ¼" – 1. (With Masonry & Steel Drill Bits).	01 No.
30.	Multimeter. (AVO Meter).	01 No.
31.	Valve Keys. (Different Size).	1 Set
32.	Rights Angle Triangle.	01 No.
33.	Allen Key Set. (Different Size).	1 Set
34.	Psychrometer.	02 Nos.
35.	Dry & Wet Thermometer.	02 Nos.
36.	Tachometer.	1 Set
37.	Sprit Level.	1 Set
38.	Speeds Meter.	01 No.
39.	Bavel Protector with attachment	1 Set
40.	Acidizing Pump with complete system (01 H.P SS Boly Pump	1 Set

**NOTE :** Contractor will also provide necessary tools & instruments at site which are required for Operation & Maintenance.

**SECTION-08**  
**FORM OF CONTRACT AGREEMENT**

This Agreement is made and entered at \_\_\_\_\_ on this \_\_\_\_\_

Day of \_\_\_\_\_ by and between \_\_\_\_\_

\_\_\_\_\_  
(hereinafter called the "Employer" which expression shall include its successors, legal representative and assigns) of the one part and \_\_\_\_\_

\_\_\_\_\_  
(hereinafter called the "Contractor" which expression shall include its successors, legal representative and permitted assigns) of the one part.

WHEREAS the Employer is desirous for the operation, maintenance, servicing and overhauling of Air-Conditioning Plants, Equipment and System viz.,

\_\_\_\_\_  
(hereinafter called the "works")

WHEREAS, under the procedure, tender has been received by the Employer for the works and the tender of the contractor for the work has been accepted by the Employer.

NOW THEREFORE, for and in consideration of the promises, covenants, agreements hereinafter contained and to be performed by the parties hereto, the said parties hereby covenant and agree as follows:-

1. In this Agreement words and expressions shall have the same meaning as are respectively assigned to them in the conditions of contract hereinafter referred to.
2. The following documents (This also means entire connected Tender/Bid Document) shall be deemed to form and be read constructed as part of this Agreement, Viz.,
  - a) The said Tender No. \_\_\_\_\_ dated. \_\_\_\_\_ Memorandum and Appendix-I & II, as amended herein.
  - b) The schedule of prices.
  - c) The conditions of contract.
  - d) The general requirement.
  - e) The scope of work.
  - f) The list of Operation & Maintenance Staff.

Also the Letter of Intent No. \_\_\_\_\_ dated: \_\_\_\_\_ and all related correspondence mentioned therein

3. In consideration of the covenants and agreements to be kept and performed by the Contractor, and for the faithful performance of this contract and the works embraced therein, in conformity in all respects with the conditions herein contained and referred to, the Employer shall pay and all Contractor shall receive and accept as full compensation for everything furnished and done by the Contractor under this Agreement, the contract price at the time and in the manner prescribed by the contract.
4. The Contractor, at his own cost and expense, shall do all work and furnish all labour, equipment, materials, instruments and tools, for the works as outlined and described in these documents except such spare parts and materials which are to be furnished by the Employer.
5. This Agreement shall take effect from \_\_\_\_\_ and shall be for a period of \_\_\_\_\_.

IN WITNESS whereof the parties hereto or here in have hereinto set their respective hands and seals on the day the month and the year first above-mentioned.

**Signed sealed and delivered**

By \_\_\_\_\_

**For and on behalf of**

\_\_\_\_\_

**( Employer )**

**In the presence of**

\_\_\_\_\_

**( Witness )**

**Signed sealed and delivered**

By \_\_\_\_\_

**For and on behalf of**

\_\_\_\_\_

**( Contractor )**

**In the presence of**

\_\_\_\_\_

**( Witness )**

