

Tender documents for the SITC of Heat Ventilation Air Conditioning (HVAC) System

For

RAS OFFICERS' CLUB PROJECT

At

**Plot No. 2, Institutional Area, Near Dainik Bhaskar office,
Gopalpura Bypass, JAIPUR**

Date and Time of submission of Tender at

Directorate of Local Bodies, 22 Godown,

Near Civil Lines Railway Crossing, Jaipur : 31st May, 2018 before 1.00 pm

Opening of Technical & Financial Bids : 01st June, 2018 at 11.00 am

Presentations : 01st June, 2018 at 1.00 pm onwards

(At DLB, Jaipur)

Time of Completion of Work : 15 Months

Following documents are enclosed with HVAC contract:

- 1. Project Detail – Annexure 1**
- 2. General Conditions – Annexure 2**
- 3. Other Information – Annexure 3**
- 4. Brief Terms & Conditions – Annexure 4**
- 5. Appendix – Annexure 5**
- 6. Approved Makes – Annexure 6**
- 7. B.O.Q (Bill of Quantity) – Annexure 7**
- 8. Drawings – Annexure 8**

PROJECT DETAILS

Supply, Installation, Testing & Commissioning Contract for complete HVAC works of the proposed RAS Officers' Institute (Club House) building at Plot No. 2, Institutional Area, Near Dainik Bhaskar, Jaipur.

RAJASTHAN PRASHASHNIK SEVA PARISHAD, a registered society having a land measuring around 3270 Sq.mt at Plot No.2, Institutional Area, near DAINIK BHASKAR is developing a **RAS OFFICERS' INSTITUTE (CLUB HOUSE)** building through **RAS Officers' Institute** (a registered society formed for the purpose of building and running this club house) who will act as the employer for the Project.

This **CLUB HOUSE** building comprising of 2 Basement floors and 6 over ground floors (with the total built up area of approx. 1,20,000 Sqft.) is supposed to house a number of facilities. It will be developed as a green complex with greenery around. The facilities include proper parking space at 2 basement and ground levels, coffee shop, indoor sports areas, outdoor sports areas, swimming pool, banquet hall, conference halls, guest rooms, restaurant, bar, roof top structures, Gym, Health Club etc.

GENERAL CONDITIONS

In constructing these conditions and the interpretations, specifications, schedule of quantities and contract of agreement, etc. the following work shall have the meaning herein assigned to them except where the subject or context is otherwise required.

- (A) **“HVAC Contractor”** shall mean to whom the contract is awarded and shall include his / their legal representative (s), Assignees(s), or successor(s).
- (B) ‘Site’ shall mean the site of the contract work including any building and creations there on as aforesaid allotted by the “RASO’I / PMC / Architect” for the HVAC Contractor’s use.
- (C) ‘Notice in Writing or Written Notice shall mean a notice in written, typed or printed characters, sent (unless delivered personally or otherwise proved to have been received including electronic communication) by the registered post to the last known private or business address and of registered office of the addressee and shall be deemed to have been received when in the ordinary course of post, it would have been delivered.
- (D) ‘Act of Insolvency’ shall mean any act of insolvency as defined and laid down by the prevalent laws of the land.

1 “HVAC Contractor” to Provide Everything Necessary

- (i) The “HVAC Contractor” shall provide everything necessary for the proper execution of the works including tools and plants according to the intent and the meaning of the drawings, schedule of quantities and specifications taken together (as amended from time to time), whether the same may or may not be particularly shown or described therein, provided that the same can reasonably be inferred there from, and if the “HVAC Contractor” finds any discrepancy in the drawings or between the drawings, schedule of quantities, and specifications, he shall immediately and in writing refer the same to the “RASO’I / PMC / Architect”. Final decision would be considered as per RASO’I decision. Figures, dimensions shall be followed in preference to scale and the following order of precedence will be followed:
 - (A) Schedule of items/ works & quantities.
 - (B) Particulars of specification.
- (i) The “HVAC Contractor” shall supply, fix and maintain at his cost during the executions of any works, all the necessary scaffolding, staging, watching, lighting by night as well as by day, etc. required not only for proper execution and protection of the public and the safety of any adjacent road, street cellars, vaults, ovens, pavements, walls, house, buildings, and all other erections, matters or things and the “HVAC Contractor” shall take down and remove any or all such scaffoldings, staging, etc., as occasion shall require or when ordered to do so and shall fully reinstate and make good all matters and things disturbed during the execution of work, to the satisfaction of the Architect / PMC and finally the “Employer”.
- (i) All the tools, tackles and testing equipment’s required to complete the work execution and testing will be in part of HVAC Contractor.

2. Eligibility Criteria: HVAC Contractor who fulfills the following requirements shall be eligible to apply.

Joint Ventures are not accepted.

Should have minimum 10 years’ experience of HVAC field and satisfactorily completed at least 3 Projects of half the area which are running in present. (RAS club area is approx120000 Sq.ft) or one project of similar area and cost during the last three years which is well-functioning in present ending the last day of the month March 2018.

Similar nature of work means the Complete Heat Ventilation Air Conditioning Job of minimum eight storied building or a building having minimum height 15 meters with superior specifications.

3 HVAC Contractor's Superintendence and Representative on the Works –

The "HVAC Contractor" shall have necessary personal experienced supervisor / engineer during the execution of the works, and as long thereafter as "RASO'I / PMC / Architect" or his representative may consider necessary until expiry of the 'Defects Liability Period' stated in the appendix which is annexed here to as **Annexure-4** of the agreement. The "HVAC Contractor" shall also, during the whole time that works are in progress, employ an authorized representative (who can also be the same person as the project Manager) who shall be constantly in attendance at the building while the men are at work. Any directions, explanations, instructions or notices given by the "RASO'I / PMC / Architect" or his authorized representative to such authorized representative shall be held to be given to the "HVAC Contractor".

4 Assignment and Subletting

The whole of the work included in the contract shall be executed by the "HVAC Contractor" and any part or share thereof or interest thereon without written permission of the "RASO'I / PMC" shall not be assigned or sublet. The RASO'I / PMC reserve the right to award the lower side of HVAC work to any other comparable vendor which is not recommended by the HVAC Contractor in his Bid.

5 Dismissal of Workman -

The "HVAC Contractor" shall on the request of the "RASO'I / PMC / Architect" or his representative immediately dismiss from the works any person employed thereon by him who may in the opinion of the "RASO'I / PMC", be incompetent or misconducts himself, and such person shall not be again employed on the works without the permission of the "RASO'I / PMC / Architect".

6 Variation not to Vitiate Contract & Ascertainment of price for extras etc.

The "RASO'I / PMC / Architect" will have power to make any alteration & omission from / addition to or substitution from the original specifications, drawings, and instructions, that may appear to him to be necessary during the progress of the work, and the "HVAC Contractor" shall carry out the work in accordance with any instruction which may be given to him in writing signed by the PMC/Architect, and such alternations, omissions, additions or substitutions shall not vitiate the contract and any altered, additional or substituted work, which the "HVAC Contractor" may be directed to do in the manner specified above as part of the work to be carried out by the " HVAC Contractor" on the same conditions in all respect on which he agrees to do the main work . In such an event, the time for the completion of the work may be extended in the proportion that the altered, additional or substituted work bears to the original contract work (only in case the changes are of a substantial nature).

The rates for such additional altered or substituted work under this clause shall be worked out in accordance with the following provisions respective by –

- (i) If the rates for the additional, altered or substituted work are specified in the contract for the work, the "HVAC Contractor" is bound to carry out the altered, additional or substituted work at the same rates as are specified in the contract for the work.
- (ii) If the rates for the additional, altered, or substituted work are not specially provided in the contract for the work, the rates will be derived from the rates for similar class of work as are specified in the contract for the work.
- (iii) If the altered, additional or substituted work includes any work for which rates cannot be derived from the similar class of work, in the contract, then such work shall be carried out at the rates as per RASO'I/PMC keeping in view the prevailing rates, mutually agreed based on the rate analysis including overheads and profit of the "HVAC Contractor"

7 Measurement of Works-

Measurements shall be taken in accordance with the standard method of mode of measurement of HVAC works as per HVAC – govt. BSR or Specification mentioned in BOQ. The “HVAC Contractor” or his agent may at the time of taking measurement take such notes and measurement as he may require. All authorized extra works, omissions, and other items if subsequently authorized by the “RASO’I / PMC / Architect” or his authorized representative in writing shall be included in such measurement.

The “HVAC Contractor” shall submit running bills supported by details and after the completion of the work to the satisfaction of the “RASO’I / PMC / Architect” the “HVAC Contractor” shall forward the final bill in the same manner as explained above. No. claim shall be entertained in respect of work after submission of final bill by the “HVAC Contractor”.

8 TESTS

After completion of the works and before first delivery is taken, a full test will be carried out of the work for a period of sufficient duration to determine the satisfactory working thereof. During this period the work will be inspected by “RASO’I / PMC / Architect” and the HVAC Contractor shall make well, to the satisfaction of the “RASO’I / PMC / Architect”, any defects which may arise.

The HVAC Contractor shall provide all instruments and equipment required for testing, completion and any other relevant requirement.

9 Notice to Be Given Before Work Is Covered Up-

The “HVAC Contractor” shall give not less than seven days’ notice in writing to the Architect/ PMC Engineer in charge or his subordinates in-charge of the work before covering up or otherwise placing beyond the reach of measurement, any work that the same may be measured, and correct dimension there be recorded before the same is so covered up or placed beyond the reach. Architect or PMC Engineer in-charge shall within the aforesaid period of seven days inspect the work, and if any work is covered up or placed beyond the reach of measurement, or without such notice having been given or PMC’s consent not obtained, the same shall be uncovered at the “HVAC Contractor’s” expense or in default thereof no payment or allowance shall be made for such work or the materials with which the same was executed.

10 Defects after Completion

Any defects, in operation of indoor & outdoor units, placement of duct as per SLD maintain the levels, Joint insulation of duct should be air tight, fixing of indoor units & grill at proper location and level as per drawing, ducts should be clean in all ways or other faults, which may appear within the ‘Defect Liability Period’, arising in the opinion of the “RASO’I / PMC’s engineer / Architect” of the materials or workmanship or specifications, drawings, and directions in the writing of the “RASO’I / Architect / PMC’s shall within such reasonable time as specified in writing be rectified, amended and made good by the “HVAC Contractor” at his own cost. The “RASO’I / PMC’s” engineer shall decide whether the “HVAC Contractor” ought to be paid for such amending and in case of default the “RASO’I / PMC” may employ and pay other persons to amend and make good such defects, reduction of cooling capacity of units / Non-working of indoor and outdoor units any fault or damage etc. or other faults, and all damages, loss and expenses consequent thereon and incidental thereto shall make good and borne by the “HVAC Contractor” and such damages, loss and expenses shall be recoverable from him by the “RASO’I / PMC”. This may be deducted by the “RASO’I / PMC” on PMC/Architect’s certificate in writing, from any money due or that may become due to him (HVAC Contractor).

11 Certificate of Virtual Completion-

The work shall not be considered as complete until the PMC Engineer/ Architect have certified in writing that the works have been virtually completed and the defects liability period shall commence from the date

of such certificate. Such certificates of virtual completion shall not be issued until the "HVAC Contractor" shall have cleared the site to the satisfaction of the "RASO'I / PMC / Architect".

HVAC Contractor has to complete all the civil related repair works (like making core holes in RCC, openings in masonry etc.) at his own cost during the execution of his scope of work. Material required for civil repair works will be provided by RASO'I.

All the openings or core cutting in brick wall or RCC will be in the scope of HVAC Contractor.

HVAC Contractor has to take prior permission in writing from PMC/MEP Engineer before making any openings in brick wall or concrete structure etc.

12 Date of Commencement and Completion

The "HVAC Contractor" shall be allowed admittance to the site in the 'Date of Commencement' stated in the Work Order, and he shall here upon and forth with begin the work and shall regularly proceed with and complete the same on or before the 'Date of completion' stated in the appendix subject nevertheless to the provision for the extension of time hereinafter contained.

13 Damage for Non-Completion

If the "HVAC Contractor" fails to complete the works by due date or within any extended time under writing, the "HVAC Contractor" shall pay or allow the "RASO'I" the "**Liquidated Damage**" for the period during which the said works shall so remain incomplete and the "RASO'I" may deduct such damage at the of **Rs. 5,000 per day** subject to the maximum of 2% of contract value will be levied. However delays due to non-supply of working drawings, natural calamities like floods, heavy rains, earth quakes and bandh, curfew etc. will not be counted in delays.

14 Damages through Unforeseen Events.

No compensation for any damage caused to the work or material by "HVAC Contractor's" work force shall be paid to the "HVAC Contractor", the "HVAC Contractor" shall have to make good all such damages himself at his own cost. (Except Force Majeure)

15 Termination of the Contract by the "RASO'I / PMC"-

On default of "HVAC Contractor" in execution of work to the satisfaction of "RASO'I / PMC / Architect" in all respects, the RASO'I shall have the right to terminate the contract after giving 15 days' notice.

16. Clearance of Site-

The "HVAC Contractor" shall have to remove debris (Scrap) related to his work from the site of work, before handing over the work to the "RASO'I / PMC". The work shall not be treated as completed in all respects unless this requirement is fulfilled by him. In the event of the "HVAC Contractor" failing to do so, the "RASO'I / Architect/ PMC" shall have the right to get site cleared, at the "HVAC Contractor's" risk and cost without prejudice to the right to recover damages under clause 13 of the contract.

17. LABOUR REGULATIONS:

17.1 REGULATIONS:

The HVAC Contractor shall be wholly and solely responsible for full compliance of provisions under all labour laws and / or regulations including the latest requirements of all the acts, laws, any regulations or bye-laws or any local or other statutory obligation applicable in relation to the execution of the work as Payment of Wages Act 1936, employees liability act 1938, workmen's compensation act 1923, industrial disputes act 1947, the Maternity benefit act 1961, the contract labour (regulation and abolition) act 1970 and the factories act 1948, minimum wages act

1948, apprentices act 1961, any other act including E.S.I.C. Act or enactment and rules framed there under from time to time, industrial employment, (standing order) act 1946 (amended), personal injuries (compensation insurance) act 1963 and any modification thereof and rules made there under from time to time, employees provident fund and miscellaneous provision act 1952, Owner's liability act 1938, or any modifications thereof or any other law relating thereto and rules there under for the time being in force introduced from time to time which may be applicable to employees of the HVAC Contractor. The HVAC Contractor shall assume liability and shall indemnify the owner from every expense, liability or payment by reason of the application of any labour law, act, rules or regulations existing or to be introduced at a future date during the term of the contract. Insurance cover towards the above shall be affected by the HVAC Contractor as called for. In general, in respect of all labour directly or indirectly employed in the work for the performance of HVAC Contractor's part of the contract, the HVAC Contractor shall comply with all the rules framed by the Government authorities concerned from time to time for protection of the health and welfare of the workers. The HVAC Contractor shall obtain a valid license under the contract labour (R & A) act 1970 and the contract labour (regulation and abolition) central rules 1971 and under any other applicable rules before the commencement of the work and continue to have a valid license until the completion of the work and shall pay the statutory fee, file returns, etc. in compliance under all such Acts.

17.2 PAYMENT OF WAGES:

The HVAC Contractor shall pay to labour employed by him either directly or through sub-HVAC Contractors wages not less than the minimum wages as defined in the relevant local labour regulations or as per the provisions of Minimum Wages Act, 1948 or the contract labour (regulation and Abolition) act 1970 and the contract labour regulation and Abolition of central rules 1971, wherever applicable and observe hours and conditions of labour's according to the conditions established for the trade or industry or prescribed by regulations or order in force in the district where the work is carried out. He shall also abide by the minimum wages and other regulations applicable to the labour engaged in the work, as laid down by the concerned local authorities to which the organizations of Owners and trade union representatives or a substantial proportions of the Owners and workers engaged in the trade or industry in the district are affiliated. In the absence of such established rates and conditions the HVAC Contractor shall pay rates or wages and observe hours and conditions of labour which are not less favorable than the general level of wages, hours and conditions observed in the trades or industries similar to those in which the HVAC Contractor in engaged.

17.3 MODEL RULES:

The HVAC Contractor shall at his own expenses comply with or cause to be complied with Model Rules for labour welfare framed by Government or other local bodies from time to time for the protection of health and for making sanitary arrangements, Malaria control, etc. for workers employed directly or indirectly on the work and in the workers hutment area including any temporary stay arrangement. In case the HVAC Contractor fails to make arrangements as aforesaid, the owner shall be entitled to do so and recover the cost thereof from the HVAC Contractor, without absolving the HVAC Contractor from all or any consequences of his defaults.

18 CONTRIBUTION TOWARDS EMPLOYEE BENEFITS, FUNDS ETC:

The contract price includes expenses necessary to meet the HVAC Contractor's obligations for making contributions towards employee benefits funds (such as provident fund , ESI benefits, old age pension and /or any other benefits/ compensation legally payable) in compliance with all the statutory regulations and requirements whether specifically mentioned here or not. All records in this connection shall be properly

maintained by the HVAC Contractor and produced for scrutiny by the concerned authorities, the Engineer-In-Charge, and the owner whenever called for.

19 **Minimum Wages Act & Rules-**

The "HVAC Contractor" shall comply with all the provision of /The Minimum Wages Act. The contract or shall, also comply with all the provisions of the P.W.D "HVAC Contractor's" Labour Regulations' made by the Government from time to time C.P.W.D., safety code framed from time to time as well as ' Model rules for the protection of health and sanitary arrangements for worker employed by the "HVAC Contractor" shall also from part of this contract. The HVAC Contractor will follow all labour laws which are applicable in the state including provident fund rules. **HVAC Contractor will ensure that in no case the RASO'I will have any responsibility about the workers/employees of the HVAC Contractor.** The RASO'I / PMC will also watch whether the HVAC Contractor follows the all labour laws **and other statutory Rules & Regulations of Govt. in this regards.**

20 **Possession Prior to Completion-**

The "RASO'I / PMC" shall have the right to taking possession of or use any completed or partially completed part of the work. Such possession or use shall not be an acceptance of any work completed in accordance with contract agreements.

21 **Alternatives-**

The "HVAC Contractor" is to quote for various alternative items of work described in the schedule of quantities. The "RASO'I / PMC" reserves the right to substitute the items in lieu of original items in the tender either in part or in full. Its revised rate if required has to be got approved by RASO'I / PMC before the execution of that particular substitute item.

22 **Record and documentation of test report-**

A proper record/ documentation of the work test report daily signed by the "HVAC Contractor"/ PMC Team Leader /site engineer will be maintained by the "PMC". All tests will be done in presence of the PMC site engineer.

23 **Taxes and Duties-**

I. Income – Tax

Income Tax at the prevailing rate, on gross amount billed, shall be deducted from HVAC Contractor's bills as per relevant provisions of the income Tax Act

II. GST will be paid extra over rates quoted as mentioned in the tender by the HVAC Contractor.

No escalation shall be allowed on material / labour. Any New Taxes applicable at any stage on any works shall be to HVAC Contractor's account. The HVAC Contractor shall include in his rates statutory obligations of his labour such as ESI, PF, etc., if applicable and indemnify the RASO'I against the same.

III. Other Taxes

HVAC Contractor shall be fully and exclusively liable for all the statutory taxes, levies, cess etc. now in force and hereafter increases, or modified in respect of works and materials by central and state government authorized.

24 Specification and drawing will be supplied by Architect. All specifications will be written on the respective drawings supplied. In case of any doubt regarding specification, Architect will be contacted and clarification sought by the "HVAC Contractor".

25 **Safety Clause-**

- I. During the execution & Testing, the safety of workers / adjacent buildings / roads/ public utilities shall be total responsibility of "HVAC Contractor" and the "HVAC Contractor" shall be responsible for injury to persons or things and all structural damages to the property which may arise from the operation or neglect of the " HVAC Contractor's" employees, nominees, "Sub-HVAC Contractor's" or their employees. Whether such injury or damages arises from carelessness, accident or any other causes whatsoever, in any way connected with the carrying out of construction pursuant to these presents.
- II. The "HVAC Contractor's" shall indemnify and keep the owners harmless against any claims, demands, actions, proceedings that may be made against the "RASO'I / PMC/ Architect" or that may be suffered by the "RASO'I / PMC / Architect" by reason of anything done by the "HVAC Contractor" pursuant to said works.
- III. The "HVAC Contractor" shall obtain required insurance policies covering all such risks covering labour engaged by them.

26. **SAFETY CODES:**

In respect of all labour directly or indirectly employed on the work for the performance and execution of the HVAC Contractor's work under the contract, the HVAC Contractor shall at his own expenses arrange for all the safety provisions as listed in (i) Safety codes of C.P.W.D. and Bureau of Indian Standards,

Precautions as stated in the safety clause are the minimum necessary and shall not preclude the HVAC Contractor taking additional safety precautions as may be warranted for the particular type of work or situations. Also mere observance of these precautions shall not absolve the HVAC Contractor of his liability in case of loss or damage to property or injury to any person including but not limited to the HVAC Contractor's labour, the owner's Engineer-In-Charge's ,architect's, owner's representative and or any member of the public or resulting in the death of any of these.

Protective gear such as safety helmets, boots, belts etc. shall be provided by the HVAC Contractor at his own cost to all his manpower at the site. The HVAC Contractor shall impose such requirements on all sub-HVAC Contractors and vendors also. It shall be the responsibility of the HVAC Contractor to ensure that such protective gear is worn at all times by all personnel working at the site during the term of the project. The owner and project manager / owner's representative shall each have the right to stop any person not wearing such protective gear from working on the site.

In case the HVAC Contractor fails to make arrangements and provide necessary facilities as aforesaid, the owner shall be entitled to do so and recover the costs thereof from the HVAC Contractor, the decision of the owner's representative in this regard shall be final and binding on the HVAC Contractor.

27 **Approximate Quantities-**

The quantities given in the Bill of Quantities are approximate only and these quantities are liable to alterations by omissions, reductions or additions to any extent without affecting the rates or terms and conditions of the Contracts.

28 All the material procured by the HVAC Contractor will be deposited in site store; A Store Keeper has to be deployed by the HVAC Contractor for the safety and issuing the material on daily basis at his own cost.

- 29 The Rates Quoted in the Schedule of Quantities includes all Lead & Lift and are valid for all heights. No Extra payment will be claimed by the HVAC Contractor on this account.
- 30 A detailed agreement will be executed between the RASO'I & the HVAC Contractor at the time of issue of work order.
- 31 Tenderers are advised to inspect and examine the site and its surrounding and satisfy themselves before submitting their tenders. A tenderer shall be deemed to have full knowledge of the site whether he inspect it or not and no extra charges consequent on any misunderstanding or otherwise shall be allowed.

Annexure –3

Other Information:

- 1) The bid document can be downloaded from the RASO'I website www.rasassociation.com , free of cost.
- 2) Bidders shall have to submit their offers in two separate envelopes.
- 3) The sealed cover within the main cover should contain:
 - (a) Qualification, Credentials, Earnest Money Deposit clearly super scribed "**Packet A**"
 - (b) Financial bid clearly super scribed "**Packet B**".

The "Packet A "should contain -

- a) Details of the Bidder, Contact Address, email, phone, Fax.
- b) Documents in support of the eligibility criteria for this bid.
- c) Bidders to provide indemnity bond stating that they are not blacklisted by any Govt. Authority/Agency.
- d) EMD by way of Demand Draft drawn in favor of "**RAS OFFICERS INSTITUTE**" payable at JAIPUR for an amount of **Rs. 100,000/-**.
- e) Copies of PAN Card, GST Registration, PF/ESI Registration, etc.
- f) Bids not supported with EMD shall be summarily rejected.

The "Packet B "should contain -

Only the financial bids of bidders eligible as mentioned above will be opened. Financial bids of the bidders failing to eligibility criteria will not be opened.

The rates shall be written properly both in figures and the words, in case of any discrepancy will consider the lowest rate as the final (as per annexure 7)

Last Date for Submission of the Bid : 31st May, 2018 before 1.00 pm hours at the address given below. Technical & Financial Bids will be opened on 01st June, 2018 at 11 am & Presentation will in presence of Construction Committee of RASO'I on 01st June, 2018 at 1.00 pm onwards at the address given below:

**DLB,
22 Godown , Civil lines
Jaipur**

RASO'I reserves the right to cancel any or all the offers or the bidding process without assigning any reason, whatsoever.

BRIEF TERMS & CONDITIONS

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|------|---|
| 1 | Project Multi-storied Club House – Near Dainik Bhaskar office, Jaipur (2 Basement + Ground + 5 Floors + Structures on Terrace) Total Gross BUA : 1,20,000 Sqft (approx.) |
| 2 | Scope of work – Complete Heat Ventilation Air Conditioning (HVAC) System as per the BOQ Enclosed |
| 3 | Type of Contract –With Material (SITC) rate contract. |
| 3.01 | The HVAC Contractor shall note that unless otherwise stated, the Contract is strictly on the Material rate basis contract. |
| 3.02 | The quantities in the Schedule of Quantities approximately indicate the total extent of work but may vary to any extent and may even be omitted thus altering the aggregate value of the Contract. No claim shall be entertained on this account |
| 3.03 | Rate Only Items / Alternatives The “HVAC Contractor” is to quote for various alternative items of work described in the schedule of quantities. The “RASO’I and its representatives” reserves the right to substitute the items in lieu of original items in the tender either in part or in full. |
| 3.04 | Material shall be provided by HVAC Contractor at site. |
| 3.05 | Electricity and water shall be provided free of cost by “RASO’I” at work site at one point. |
| 4 | SUFFICIENCY OF RATES |
| 4.1 | The HVAC Contractor shall be deemed to have satisfied himself before contracting as to the correctness and sufficiency of his contract for the works and of the prices stated in the schedule of quantities and/or the schedule of rates and prices which rates and prices shall cover all his obligations under the contract, and all matters and things necessary for the proper completion of the works. |
| 4.2 | The Rates Quoted in the Schedule of Quantities includes all Lead & Lift is valid for all heights. No Extra payment will be claimed by the HVAC Contractor on this account |
| 4.3 | The rates shall include all taxes, duties, Excise Duty, Octroi, Cess, at prevailing rates except the GST which will be borne by the RASO’I. The increase in taxes and duties in future will be the liability of the HVAC Contractor. |
| 4.4 | Rates are fixed for the duration of the project and no escalation shall be allowed for variation in price on labour, diesel, freight, taxes, octroi, any duty, levies etc. The HVAC Contractor shall include in his rates statutory obligations on his labour compliance such as ESI, PF, etc, if applicable. |

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| 4.5 | The rates shall be inclusive of: The rates quoted in the Contract shall include all charges for clearing of Site before and after commencement, fencing, hoarding, Plant and equipment, storage sheds, watching and lighting on all days and all other erections. |
| 4.6 | The rates quoted shall be deemed to be for the finished work to be measured at Site and include the rate for protection of the finished items. |
| 4.7 | TDS at prevailing rates on the gross value of each running bill will be deducted at source. Worker's compensation is to be borne by the HVAC Contractor himself. |
| 5 | <p>Manpower Resources</p> <p>That all the labour, staff, supervisors and engineers will be provided by the HVAC Contractor for the Water Proofing Work purpose. The engineering staff to be provided by the HVAC Contractor will be adequate nos. of supervisors / foremen which would be jointly agreed. Before commencement of any work, detailed construction schedule to be submitted by the HVAC Contractor for the same. And in case of deviation from that schedule, recovery measures and revised schedule to be provided by him every time.</p> |
| 6 | That all the staff members, labour, workers, supervisor, engineers, operators etc. will be the employee of HVAC Contractor itself, and the owner/RASO'I / PMC will not be in any way treated as an RASO'I / PMC. Thus, there will be no RASO'I / PMC – Employee relationship. |
| 7 | <p>Tools & Plants</p> <p>All tools, plants, machinery etc. shall be arranged by the HVAC Contractor. The list of the same to be submitted by the HVAC Contractor with the tender.</p> |
| 8 | <p>Completion Period</p> <p>Time is the essence of the contract. The Completion period of the work shall be 15 Months from the date of commencement as per schedule attached herewith.</p> <p>(Note – All these milestone dates are the latest dates by which these activities should start & finish. However HVAC Contractor can pre- pone the activities if as per his schedule the activities needs to be started earlier to achieve the handing over dates).</p> |
| 9 | <p>Damages</p> <p>That all the damages caused by the accident or the carelessness of the workmen, or any material are wasted or is misused by the workmen, will be to the account of the HVAC Contractor, who shall make good the same.</p> |
| 10 | <p>Penalty for the delay</p> <p>In case of delay in completion of Project in stipulated period of completion a penalty of Rs. 5,000/- per day subject to the maximum of 2% of contract value will be levied.</p> <p>However delays due to non-supply of working drawings, natural's calamities like floods, heavy rains, earth quakes, strikes, bandh, curfew etc. will be considered and the suitable extension will be given.</p> |
| 11 | <p>SAFETY</p> <p>The HVAC Contractor acknowledges and agrees that they will exercise the overall co-ordination of safety matters relating to the Project including those affecting the HVAC Contractor's personnel. The HVAC Contractor further acknowledges that the Engineer in Charge / Project Manager shall have the right to instruct direct or take any action deemed necessary to ensure that the Safety issues are met. This does not relieve the HVAC Contractor of its responsibilities relating to its personnel or the Works.</p> <p>The HVAC Contractor must at all times exercise all necessary precautions for the safety of all persons on the Site, members of the public who may be affected by the Works and the protection of the environment.</p> |

| | |
|----|--|
| | If any misshaping occurs in future fully or partly due to poor workmanship or material used by the HVAC contractor, it shall be the sole responsibility of HVAC contractor only. |
| 12 | <p>Minimum Safety Requirements</p> <p>Proper working platform shall be provided for working at height more than 2.0m / 6'6". Harnesses and personal protective equipment must be used as a last resort.</p> <p>All persons working on suspended scaffolds/cradles/gondolas must wear and use appropriate fall prevention equipment so as to protect them effectively at all times when they are at risk from any failure of any part of the scaffold/cradle/gondola, including its suspension system.</p> <p>Free-standing scaffold towers used externally must not be higher to the top platform level than three times the minimum base dimension, unless secured to a permanent structure. For internal use only, the height to platform may rise to 3.5 times the minimum base dimension. Wheels must be locked when towers are in use. No person is permitted to remain on a tower platform while a tower is being moved.</p> <p>Adequate lighting must be provided to enable safe access to and egress from every place on a site where persons are liable to work; this is in addition to task lighting.</p> |
| 13 | <p>R.A. Bills</p> <p>The bills shall be paid either monthly or subject to a minimum amount of Rs. 500,000/-. Fifty (50%) percent of the bill amount shall be paid within Seven working days after submission of bills. Balance payments shall be made within next seven days after getting bill verified from PMC</p> <p>Security deposits shall be deducted @ 5% from each Running bill. 50% of this S.D. will be refund after satisfactory completion of works and balance after the expiry of "Defects Liability Period" of 2 Years</p> |
| 14 | In case the work is temporarily suspended by the "RASO'I" due to reasons beyond his control, adequate extension in completion period may be considered but no financial damages will be paid to the "HVAC Contractor". |
| 15 | In case work is abandoned by the "HVAC Contractor", the security money shall be forfeited by the "RASO'I and its representative" after giving 7 days' notice by registered post. The work done by him will be measured & finalized & balance left over work will be awarded by the RASO'I / PMC to some other HVAC Contractor at the risk & cost of the HVAC Contractor who left the work incomplete. |
| 16 | In case any dispute or difference should arise between the parties, whether in respect of work done or in respect of quality of material used by the HVAC Contractor or delay in completion of work or any other matter arising out of works or relating to the specifications, designs, drawings, orders during the progress of the work or after the completion or abandonment thereof or any matter arising out of the agreement shall be referred to the sole arbitrator. The arbitrator shall decide the dispute within two months. This submission to arbitration shall be deemed to be a submission to arbitration within the meaning of the Arbitration and Conciliation Act, 1996 or any statutory modification thereof. The award of the arbitrator shall be final, conclusive and binding. Legal jurisdiction shall be that of Jaipur courts only. |
| 17 | The HVAC Contractor will not divert the funds/payments released for the project to the other project. The statement should be provided briefing the detail of major transactions done for the project whenever asked for. |

The documents including annexure have been read by us and fully understood by us.

Appendix

| | | |
|-----|---|--|
| 1. | Date of commencement | Within 07 days of work order |
| 2. | Time of completion | 15 months from Date of commencement |
| 3. | Liquidated damages for non-completion of work in time per day | Rs. 5,000 /- per day subject to the ceiling of 2 % of contract value |
| 4. | Minimum interval between submission of interim bill | One Month - |
| 5. | Minimum value of works for interim certificate | Rs. 500,000.00/- |
| 6. | Maximum period of payment of interim bills | 15 (fifteen) days from the date of submission of bills/ 50 % within 7 working days, remaining with in next 7 days after verification of bill - |
| 7. | Period of submitting the final bills | Within one month of the completion - |
| 8. | Machine Warranty Time | 02 Year from the date of Invoicing. |
| 9. | Work Warranty Time | 02 Year from the date of certificate. |
| 10. | Payment of S.D. | 50 % with Final Bill Payment, remaining amount after defects liability period - |
| 11. | Defects liability period | 2 year from the date of completion of the work. |
| 12. | Approved makes of material to be used | As per enclosed Annexure 6 |

HVAC CONTRACTOR

RASO'I

MAKES OF Air Conditioning ITEMS

| S. No. | Item | Make |
|---------------|--------------------------|--|
| 1 | VRF / VRV | (Mention your make as per you) |
| 2 | Copper Piping | Hitachi / Totaline / Maxflow or Eqv. |
| 3 | Ducting Sheet | TATA / SAIL / JSW or Eqv. |
| 4 | Ducting Insulation | Ecoflex / Armaflex / K flex or Eqv. |
| 5 | Piping Insulation | Ecoflex / Armaflex / K flex or Eqv. |
| 9 | Control Cabling | Polycab / Finolex or Eqv. |
| 7 | Drain Pipe | Kisan / Astral / Supreme or Eqv. |
| 8 | Grille/Diffuser | System Air/Metal Joints or Eqv. |
| 9 | Refrigerant Gas Charging | Dupoint /Honeywell / Floron or Eqv. or As per recommended norms. |
| 10 | In Line Fans | System Air / Carrier / Kruger or Eqv. |

Annexure –7

**RAS OFFICERS CLUB BUILDING PROJECT AIR CONDITIONING WORK BOQ
(VRV/VRF OR NON VRF)**

| S.NO | Item | Unit | Qty. | Rate | Amount |
|-----------|--|------|------|-------|--------|
| | | | | (Rs.) | (Rs.) |
| 1 | Outdoor Units-Heat Pump (R410A)-N. Cap. | | | | |
| i | Supply of following nominal capacity outdoor unit with heating & cooling option with multiple scroll Inverter compressor including DC inverter scroll compressor / DC twin rotary compressor, with multiple fans side discharge , microprocessor panel , first charge of refrigerant R 410a and capable to operate upto 50 Degree C ambient. Including connection kit and complete as required. | | | | |
| | ODU -8 HP Side Discharge ODU | Nos. | 2 | | |
| | ODU -10 HP Side Discharge ODU | Nos. | 4 | | |
| | ODU -12 HP Side Discharge ODU | Nos. | 17 | | |
| | ODU -16 HP Side Discharge ODU | Nos. | RO | | |
| ii | Supply of following nominal capacity outdoor unit with heating & cooling option with multiple scroll compressor including DC inverter scroll compressor / DC twin rotary compressor , with multiple fans top discharge , microprocessor panel , first charge of refrigerant R 410a and capable to operate upto 50 Degree C ambient. Including connection kit and complete as required. (Note: Minimum COP of the System shall not be less the 3.7 at 100% load at 27'C DB inside air ition and 35'C DB outside.) | | | | |
| | ODU -10 HP Top Discharge ODU | Nos. | RO | | |
| | ODU -12 HP Top Discharge ODU | Nos. | RO | | |
| | ODU -16 HP Top Discharge ODU | Nos. | RO | | |
| | ODU -24 (HP) Top Discharge ODU | Nos. | RO | | |
| | ODU -32 (HP) Top Discharge ODU | Nos. | RO | | |
| | ODU -36 (HP) Top Discharge ODU | Nos. | RO | | |

| | | | | | |
|----------|--|------|----|--|--|
| 2 | Supply of VRF/VRV indoor units with multispeed fan , electronic expansion valve , filter , refnet joint and cordless remote , of following nominal capacities. | | | | |
| I | Hi-Wall Type - 1.0 TR + Ref Joint | Nos. | 7 | | |
| li | Hi-Wall Type - 1.5 TR + Ref Joint | Nos. | 4 | | |
| lii | Hi-Wall Type - 2.0 TR + Ref Joint | Nos. | 1 | | |
| lv | One Way Cassette Type - 2.0 TR + Ref Joint | Nos. | 4 | | |
| V | 4 Way Cassette Type - 3.0 TR + Ref Joint | Nos. | RO | | |
| Vi | 4 Way Cassette Type - 3.5 TR + Ref Joint | Nos. | 4 | | |
| Vii | 4 Way Cassette Type - 4.0 TR + Ref Joint | Nos. | 3 | | |
| Viii | Ductable Type - 2.5 TR + Ref Joint | Nos. | 34 | | |
| ix | Ductable Type - 3.0 TR + Ref Joint | Nos. | 13 | | |
| X | Ductable Type - 4.0 TR + Ref Joint | Nos. | 3 | | |
| Xi | Ductable Type - 5.0 TR + Ref Joint | Nos. | 10 | | |
| Xii | Ductable Type - 6.0 TR +Ref Joint | Nos. | 4 | | |
| Xiii | Ductable Type - 8.0 TR + Ref Joint | Nos. | RO | | |
| 3 | Centralized Control System i-Touch or as per Site incharge and Consultant. | LS | 1 | | |
| 4 | Supply of air cooled air conditioning system complete with outdoor units comprising condenser, scroll/reciprocating compressors, etc. and indoor units comprising various types of evaporative blowers, expansion device , microprocessor based remote controls, etc. Refrigerant used shall be R- 410A. | | | | |
| I | 8.5 Tr Ductable type(Double circuit) | Nos. | 8 | | |
| li | 11.0 Tr Ductable type(Double circuit) | Nos. | 7 | | |
| 5 | Supplying of HRV (Heat Recovery Unit) suitable for installing in any position in vertical or horizontal ducts and Unit made out of 1.6 mm thick sheet steel powder coated enclosure comprising of over load protection relay, short circuit & single phasing protection, ON / OFF push buttons, ammeter, voltmeter, indicating lamps, MCB etc. complete in all respect. | | | | |
| | 500 CMH | Nos. | RO | | |
| | 600 CMH | Nos. | 2 | | |
| | 800 CMH | Nos. | 2 | | |
| | 1000 CMH | Nos. | RO | | |

| | | | | | |
|------------------------------------|--|------|----|--|--|
| 6 | Supply of TFA (Treated Fresh Air Unit) or suitable Capacity and of 6 row deep cooling coil compatible to Integrate with VRV/VRF ODU of suitable Capacity. | | | | |
| | 500 CMH | Nos. | RO | | |
| | 600 CMH | Nos. | 6 | | |
| | 800 CMH | Nos. | 2 | | |
| | 1000 CMH | Nos. | RO | | |
| | | | | | |
| Total Amount Equipment -Rs. | | | | | |

| Installation of VRV/VRF airconditioning system of following items | | | | | |
|--|--|------|------|------|--------|
| S.No. | Description | Qty. | Unit | Rate | Amount |
| | | | | Rs. | Rs. |
| 1a | <u>Variable Refrigerant Volume System</u> | | | | |
| | Lifting, shifting, positioning, installation, testing and commissioning of outdoor units, fittings(Imported Y-joints & header etc.) remote controls of indoor units, complete as per specification and drawings. | | | | |
| | Outdoor Units-Heat Pump (R410A)-N. Cap. | | | | |
| | ODU -8 HP Side Discharge ODU | Nos. | 2 | | |
| | ODU -10 HP Side Discharge ODU | Nos. | 4 | | |
| | ODU -12 HP Side Discharge ODU | Nos. | 17 | | |
| | ODU -16 HP Side Discharge ODU | Nos. | RO | | |
| | ODU -10 HP Top Discharge ODU | Nos. | RO | | |
| | ODU -12 HP Top Discharge ODU | Nos. | RO | | |
| | ODU -16 HP Top Discharge ODU | Nos. | RO | | |
| | ODU -24 (HP) Top Discharge ODU | Nos. | RO | | |
| | ODU -32 (HP) Top Discharge ODU | Nos. | RO | | |
| | ODU -36 (HP) Top Discharge ODU | Nos. | RO | | |
| | | | | | |
| | Indoor Units | | | | |
| I | Hi-Wall Type - 1.0 TR + Ref Joint | Nos. | 7 | | |
| li | Hi-Wall Type - 1.5 TR + Ref Joint | Nos. | 4 | | |
| lii | Hi-Wall Type - 2.0 TR + Ref Joint | Nos. | 1 | | |
| iv | One Way Cassette Type - 2.0 TR + Ref Joint | Nos. | 4 | | |
| V | 4 Way Cassette Type - 3.0 TR + Ref Joint | Nos. | RO | | |
| Vi | 4 Way Cassette Type - 3.5 TR + Ref Joint | Nos. | 4 | | |
| Vii | 4 Way Cassette Type - 4.0 TR + Ref Joint | Nos. | 3 | | |
| Viii | Ductable Type - 2.5 TR + Ref Joint | Nos. | 34 | | |
| ix | Ductable Type - 3.0 TR + Ref Joint | Nos. | 13 | | |
| X | Ductable Type - 4.0 TR + Ref Joint | Nos. | 3 | | |

| | | | | | |
|------|--|------|-----|--|--|
| Xi | Ductable Type - 5.0 TR + Ref Joint | Nos. | 10 | | |
| Xii | Ductable Type - 6.0 TR +Ref Joint | Nos. | 4 | | |
| Xiii | Ductable Type - 8.0 TR + Ref Joint | Nos. | RO | | |
| | | | | | |
| 1b | Lifting, shifting, positioning, installation, testing and commissioning of indoor & outdoor units and fittings with remote controls of indoor units, complete as per specification and drawings. | | | | |
| I | 8.5 Tr Ductable type(Double circuit) | Nos. | 8 | | |
| li | 11.0 Tr Ductable type(Double circuit) | Nos. | 7 | | |
| | | | | | |
| 2 | <u>Commission of VRV systems including topping of gas per site requirements</u> | | | | |
| | R410A Gas charging in VRV System | Lot | 1 | | |
| | | | | | |
| 3 | <u>Refrigerant Piping</u> | | | | |
| | Interconnecting refrigerant pipe work with (19mm/13 mm thick) closed cell elastomeric nitrile rubber tubular insulation between each set of indoor & outdoor units as per specifications, all piping inside the room shall be properly supported with MS hanger. | | | | |
| I | 41.3 mm O.D. (insulation : 19 mm) | Rm | RO | | |
| li | 34.9 mm O.D. (insulation : 19 mm) | Rm | RO | | |
| lii | 28.6 mm O.D. (insulation : 19 mm) | Rm | 350 | | |
| lv | 22.2 mm O.D. (insulation : 13 mm) | Rm | 320 | | |
| V | 19.1 mm O.D. (insulation : 13 mm) | Rm | 800 | | |
| Vi | 15.9 mm O.D. (insulation : 13 mm) | Rm | 265 | | |
| Vii | 12.7 mm O.D. (insulation : 13 mm) | Rm | 240 | | |
| Viii | 9.5 mm O.D. (insulation : 13 mm) | Rm | 670 | | |
| lx | 6.4 mm O.D. (insulation : 13 mm) | Rm | 30 | | |
| | | | | | |
| | <u>For Normal unit</u> | | | | |
| I | 8.5 TR | Rm | 250 | | |
| II | 11.0 TR | Rm | 200 | | |
| | | | | | |
| 4 | <u>Drain Piping</u> | | | | |
| | Providing and fixing rigid PVC piping complete with fittings, supports as per specifications and duly insulated with 6 mm thick closed cell nitrile rubber insulation. | | | | |
| I | 25 mm dia. | Rm | 400 | | |
| li | 32 mm dia. | Rm | 300 | | |
| lii | 40 mm dia. | Rm | 150 | | |

| | | | | | |
|-----|--|------|------|--|--|
| 5 | Control & Transmission Wiring | | | | |
| | Providing & fixing control cum transmission wiring of 2 / 3 core x 1.5 Sq.mm copper in suitable conduits between indoor and outdoor units to centralized controller. | Rm | 1500 | | |
| 6 | Making hole in brick masonry/ RCC with core cutter for accommodating refrigerant pipe/ drain pipe for split/ cassette | Job | 1 | | |
| 7 | Supply & fixing MS powder coated stand suitable for 1.0/1.5/ 2.0 Tr outdoor type of Split AC. | Nos. | RO | | |
| 8 | Supply & fixing MS powder coated stand suitable for 2.5/3.0/4.0 Tr outdoor type of Split/Ductable/Tower AC. | Nos. | RO | | |
| 9 | SITC of ducting made from GSS of class VIII & fabricated as per IS:655 and as per approved drawings & designs including the cost of hangers, supports , angle , expansion fasteners , closed cell neoprene gasket T&P etc. as required of following gauge: | | | | |
| I | 0.46mm (20 G) | RO | | | |
| II | 0.63mm (24 G) | Sqm | 980 | | |
| III | 0.80mm (22 G) | Sqm | 650 | | |
| 10 | Insulation And Acoustic | | | | |
| | Providing and fixing nitrile rubber insulation (fire retardant) on ducts complete as per specifications. | | | | |
| I | 9 mm thick Nitrile insulation Tube (O Class) | Sqm | 900 | | |
| li | Acoustic Lining on Duct with elastomeric nitrile (15mm) O Class | Sqm | 750 | | |
| 11 | Grilles/Diffusers | | | | |
| | Providing, fixing, testing and commission- ing supply and return air grilles/ diffusers as per specifications and drawings | | | | |
| I | Aluminum supply air grills with damper. | Sqm | 28 | | |
| li | Aluminum supply/return air grilles without damper. | Sqm | 42 | | |
| 12 | Canvas connections | | | | |
| I | Providing and fixing Fire retardant non porous double layer flexible connection between each indoor unit and duct. | Nos. | 72 | | |
| | | | | | |

| | | | | | |
|----|--|------|----|--|--|
| 13 | Supplying, installing, testing and commissioning of INLINE FANS 300 CFM suitable for installing in any position in vertical or horizontal ducts. The casing shall be double skin, internally acoustically lined and constructed of galvanized steel. The fan shall be DIDW with forward curve impeller fitted with maintenance free external rotor motor. The motor shall be suitable for 220±10% volt single phase 50 cycles AC supply. Quoted price shall be inclusive of electronic speed regulator and wiring between fan & speed regulator for single phase fans. In case of 3 phase fans quoted price shall be inclusive of DOL starter panel with cabling between starter panel and fan. The incoming power supply to speed regulator / starter panel shall be provided by electrical contractor. As required | | | | |
| | 300 CFM | Nos. | RO | | |
| | 400 CFM | Nos. | RO | | |
| | 600 CFM | Nos. | RO | | |
| 14 | Installing, testing and commissioning of HRV (Heat Recovery Unit) suitable for installing in any position in vertical or horizontal ducts and Unit made out of 1.6 mm thick sheet steel powder coated enclosure comprising of over load protection relay, short circuit & single phasing protection, ON / OFF push buttons, ammeter, voltmeter, indicating lamps, MCB etc. complete in all respect. | | | | |
| | 500 CMH | Nos. | RO | | |
| | 600 CMH | Nos. | 2 | | |
| | 800 CMH | Nos. | 2 | | |
| | 1000 CMH | Nos. | RO | | |
| | | | | | |
| 15 | Installing, testing and commissioning of TFA (Treated Fresh Air Unit) or suitable Capacity and of 6 row deep cooling coil compatible to Integrate with VRV/VRF ODU of suitable Capacity. | | | | |
| | 500 CMH | Nos. | RO | | |
| | 600 CMH | Nos. | 6 | | |
| | 800 CMH | Nos. | 2 | | |
| | 1000 CMH | Nos. | RO | | |
| | | | | | |
| | Total Rs. | | | | |
| | Grand Total | | | | |

Terms & Conditions

TDS : Included in above mentioned rates

GST will be charged extra

Mobilisation Advance : Nil

The actual payment shall depend on the actual work done as detailed in the document.

Annexure – 8

Drawings