

CENTRAL BOARD OF SECONDARY EDUCATION
SHIKSHA KENDRA, 2, COMMUNITY CENTRE, PREET VIHAR, DELHI-92

Short term tender for Air- Conditioning work

Last date to submit tender : 3.10.2013 upto 2.00 p.m.

Name of the work : Air conditioning works for CBSE, NICPD, 76 G, Sec 18, Gurgaon (Haryana)

Scope of work : Ductable unit, Ducting, piping, insulation, electrical wiring, Control Panel etc

Date of Starting : -----

Time of completion: : 1 Months

1. Tenders are invited from experienced H.V.A.C. contractors under two-bid system. Each tenderer shall submit with his tender a list of H.V.A.C. installations of a like nature they have executed, giving details as to their size and application.
2. If the tender is made by an individual it shall be signed with his full name and his complete address shall be given. If it is made by a firm, it shall be signed with the co-partnership name and address of the firm who shall sign his own name and give the name and address of each member of the firm and attach a copy of the power of attorney with the tender. Each tender is to be in a sealed cover superscripted (Air conditioning works for CBSE, NICPD Sealed tender documents will be addressed to Joint Secretary (A&L) and dropped in the tender-box placed at Reception Counter, CBSE HQ Bldg., 2 CC, Preet Vihar Delhi-110092.
3. The acceptance of a tender will rest with the employer which does not bind itself to accept the lowest tender and reserve to itself the authority to reject any or all the tenders received without assigning any reason. All tenders in which any of the prescribed conditions are not fulfilled or are incomplete in any respect are liable to be rejected.
4. Tenders shall remain open for acceptance for a period of (60) Sixty days from the date of opening of tenders.
5. The successful tenderer must be co-operative with the other contractors appointed by the employer so that the work shall proceed smoothly with the least possible delay and to the satisfaction of the Engineer-In-Charge.
6. The tenderer whose tender has been accepted shall within four days of the intimation of the acceptance of tender hand over the Engineer-In-Charge a stamp paper of suitable value. Tenderer's

failure to supply stamp paper within the time shall give right to the employer to revoke the acceptance of tender without any further notice to the tenderer.

Letter of Acceptance

Date

Subject:-

Sir,

I / we hereby tender for the execution of the work specified in the under written memorandum within the time specified at the rates specified therein accordance in all respects with the specifications, design, drawings and instructions issued in this regard.

I/we hereby distinctly and expressly declare and acknowledge the before the submission of my/our tender. I/we have carefully followed the general instructions and read the detailed specifications and schedule of quantities and clearly understood all the conditions of contract. I/we have also seen the location where the said work is to be done and made such investigations of the work required in regard to the materials required to be furnished as to enable me/us to complete the work successfully.

I/we agree to complete the work in 4 Weeks from the date of award of work.

I/we agree to keep the offer open for 60 days from the date of opening of tender.

Yours faithfully,

Signature.

Articles of Agreement

Article of agreement made at Gurgaon _____ this _____
_____ day of _____
— between Central Board of Secondary Education the employer which expression shall include its successors and assigns and all the persons for the time being in management of the employer of the one part and M/s _____ (hereinafter referred to as contractor's which expression shall include his/their respective heirs, successors, executors, administrators and assigns of the other part.

Whereas the employer invited tender for the works of Air Conditioning for CBSE, NICPD as per drawings, schedule of quantities, specifications, etc., describing the work to be prepared for _____

Whereas the contractor tendered for such work under tender date _____
—

Whereas the tender as submitted by the contractor was accepted by the employer, on the terms and conditions hereinafter specified.

Whereas the contractor had deposited with the engineers in-charge on behalf of the employer, by bank draft a sum amounting to Rs. 4000/- For the due and faithful performance of the contract on the part of the contractor.

Now it is hereby agreed and declared between the parties whereto as follows :

- 1) In consideration of the payments to be made to the contractor's as hereafter provided in appendix, the contractor shall upon and subject to the conditions herein contained and the said conditions of contract execute and complete the work shown upon the drawings and such further detailed drawings as may be furnished to him and described in the said specifications and the said schedule of quantities. By.....
- 2) The employer shall pay the contractor such sums as shall become payable hereunder at the time and in the manner specified in the said conditions.
- 3) Time is the essence of the agreement and the contractor shall pay or allow the employer to deduct 10% of the contract value (which percentage shall be determined at the Discretion of the

Engineers-In-Charge and the employer depending upon the circumstances of the case) and subject to clause no.1, of the above agreement as liquidated damages for the period during which the said work shall remain incomplete beyond the time allowed in clause 1 above or beyond the time duly extended in writing as per said conditions. The employer may deduct such damages from any money due to the contractor.

- 4) The term Engineers-In-Charge in the said conditions shall mean -----
-----and in the event of his/their death or ceasing to be the Engineers-In-Charge for the purpose of this agreement such other engineers in-charge not being an Engineers-In-Charge or Engineers-In-Charge to whom the contractor shall object for reasons considered to be sufficient by the employer, provided always that the Engineers- In-Charge subsequently appointed shall not be entitled to disregard or overrule any decisions given by or under the authority or direction of the previous Engineers In Charge.
- 5) The plans, agreement and documents above mentioned shall form the basis of this agreement and the decisions of the said Engineers-In-Charge or the other Engineers-In-Charge for the time being as mentioned in the said conditions. In reference to all matters of dispute as to materials and workmanship shall be final and binding on both parties.
- 6) The employer through the Engineers-In-Charge reserves to himself the right of altering the drawings and or adding to or omitting any item of work or of having portions of the same carried out departmentally or otherwise and such variations shall not vitiate this agreement.
- 7) This agreement comprises the work above and all subsidiary work therewith, even though such works may not be shown on the drawings, or described in the said specifications or the schedule of quantities.
- 8.) Disputes and Arbitration
- 8.1) Settlement of Disputes
- 8.1.1 The disputes and differences arising out of or in connection with drawings/ design shall be referred to the Architects who shall state his decision in writing. His decision with respect to interpretation of his drawing/design shall be final, conclusive and binding on the parties here to and shall be without appeal. In other places, Owner's decision is final.
- 8.1.2 All other disputes and differences of any kind whatsoever arising out of or in connection with the contract of the carrying out of the work (Whether during the progress of the work or after its completion and whether before or after determination, abandonment or breach of the contract) shall be referred to the Owner who shall state his decision in writing.
- 8.1.3 The venue of the arbitration shall be New Delhi. The Arbitrator(s) shall be deemed to have entered on the reference on the date he/they issue(s) notice to both the parties fixing the date of the first hearing.

8.1.4 The Arbitration(s) shall give a separate award with reasons in respect of each dispute or difference referred to him/Them. The award of the Arbitrator / Arbitrators or the Competent Authority of the Board shall be final, conclusive and binding on all the parties to this contract.

8.1.5 Such reference, except as on the withholding by the Engineer-In-Charge of any payment under the Contract, shall not be opened as entered upon until after the completion or alleged completion of the work or until after the practical cessation of the work arising from any cause unless with the written consent of both the Owner and the Contractor.

8.2 Work and Payment During Arbitration

8.2.1 The work under the contract shall, if reasonably possible, continue during the Arbitration proceedings and no payment due or payable to the Contractor shall be withheld on account of such proceedings.

8.2.2 The Contractor shall proceed with the work with all due diligence and no award of the Arbitrator/Arbitrators shall relieve the Contractor of his obligations under the Contract. The Contractor shall adhere strictly to the Architects/ Consultants/Engineer-In-Charge's instructions with regard to actual carrying out the work. The Contractor shall also with due diligence ensure progress of work within committed time schedule.

9) This invitation to tender and general instructions to contractors, agreement and schedule of conditions of contract, appendix, schedule of quantities and systems specifications, etc., hereto annexed form part of this contract.

This contract has been read by us and fully understood by us.

In witness whereof the parties hereto have set in their respective hands the day and the year herein above written _____

Signed by for an on behalf of the employer

Signed by the said contractor

In the presence of

In the presence of

Condition of Contract

1. Definition

In constructing this contract as defined in 1(E) below the following words shall have the meaning herein assigned to them except where the subject or contract otherwise requires :

- A) Employer : Shall mean CBSE and shall include his /their representative/s Assign/s successor/s.
- B) Contractor : Shall mean -----& shall include his/their legal representative/s Assign/s successor/s.
- C) Architects : Shall mean M/s ----- and shall Include his/their legal representative/s Assign/s successor/s.
- D) Consultants : Shall mean **M/s** ----- and shall include his/their legal representative/s Assign/s successor/s.
- E) Site : Shall mean the site of the contract works.
- F) This contract : Shall mean invitation to tenders and General instruction to contractor's letter of acceptance of tender. Articles of Agreement and Conditions of contract, the Appendix, system specifications and the schedule of Quantities attached here to and duly Signed.
- G) Notice in : Shall mean a notice in writing, writing or typed, or printed characters. Written notice (unless delivered personally or otherwise proved to have been received) by registered post the Last known private or business address registered offices of Addressee and

shall be deemed to have been received when in the ordinary course of post it would have been delivered.

Words importing persons include firm and corporations. Words importing the singular only also include the plural and Vice-Versa where the contract requires.

2. Scope of contract:-

The contractor shall carry out and complete the said work in every respect in accordance with this contract and under the directions of and to the satisfaction of the Engineers-In-Charge. The Engineers-In-Charge may in His discretion and from time to time issue further drawings and/or written instructions, details, directions and explanations which are hereunder collectively referred to as "Engineers In Charge" instruction in regard to :-

- A) The variation or modification of the design, quality or quantity of works or omission or substitution of any work.
- B) Any discrepancy in the drawings or between the schedule of quantities and/or drawing and/or specifications.
- C) The removal and/or re execution of any works executed by the contractor.
- D) The dismissal from the works of any person employed there upon.
- E) The amending and making good of any defects under clause 21. The contractor shall forth with comply with and duly execute any work comprised in such Engineers-In-Charge instructions provided always that verbal instructions, directions and explanations given to the contractor or his representative upon the works by the Engineers-In-Charge shall if involving a variation, be confirmed in writing by the contractor within 14 days. And if not dissented from in writing within a further 7 days by the Engineers-In-Charge, such shall be deemed to be the engineers incharge instructions within the scope of the contract.

3. Contract to provide everything necessary

- A) The contractor shall provide everything necessary for the proper execution of the work according to the intent and meaning of the drawings, schedule of quantities and specifications taken together whether the same or may not be particularly shown or described therein provided that the same can be reasonably inferred the reform, and in case of any discrepancy in the drawings or between the drawings, schedule of quantities and specifications, the more stringent shall be followed.
- B) The contractor shall supply, fix and maintain at his own cost during the execution of any works, all the necessary centering, scaffolding, staging, planking, timbering, strutting, shoring 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 the works, to the satisfaction of the consultant.

4. Authorities notices and patents :

The contractor shall conform to the provisions of any act of legislature relating to the works, and to the regulations and by-laws of any authority, and of any water, lighting and other companies and/or authorized with whose system the plant is proposed to be connected, and shall before making any variations from the drawings or specifications that may be necessitated by so conforming, give to the Engineers-In-Charge written notice specifying the variation proposed to be made and the reasons for making it and apply for instructions there on. In case the contractor shall not within 5 (five) days receive such instructions he shall proceed with the work, conforming to the provisions, regulations or by-laws in question. The contractor shall indemnify the employer against all claims in respect of patent rights and shall defend all act once arising from such claims, and shall himself pay all royalties license fees, damage, costs and charges of all and every sort that may be legally incurred in respect thereof.

5. Contractor's supervision on the works

The contractor shall give all necessary personal superintendence during the execution of the works, and as long thereafter as the Engineers-In-Charge may consider necessary until expiration of the "Guarantee Period" stated in the appendix hereto. The contractor shall also during whole time the works are in progress, appoint a competent qualified who shall constantly supervise work at site.

6. Access of Engineers In Charge to work :

The Engineers-In-Charge/Employer and their representative shall at all reasonable time here free access to the works. The contractor shall give every facility to the Engineers-In-Charge/Employer and their representative, necessary help for instructions and examinations and test of the materials and workmanship.

7. Measurement of works

The Engineers-In-Charge may from time to time intimate to the contractor that he requires the works to be measured and the contractor shall forthwith attend or send a qualified agent to assist the Engineers-In-Charge or the Engineers-In-Charge's representative in taking such measurements and calculations and to furnish all particulars or give all assistance required by either of them. Should the contractor not attend or neglect or omit to send such agent, then the measurements taken by the Engineers-In-Charge or approved by him shall be taken to be the correct measurements of the works. Such measurements shall be taken to be the correct measurements of the works, in accordance with the standard method of measurements, as in prevalent use, for the Air Conditioning system.

The contractor or his agent may at the time of measurement take such notes and measurements as he may require. The contractor shall submit running bills supported by detailed measurement sheets as and when necessary preferably fortnight for all the works executed by him up to date.

After the virtual completion of the works to the satisfaction of the Engineers-In-Charge, the contractor shall forward the final bill in the same manner as explained above. No claims shall be entertained in respect of works after submission of the final bill by the contractor.

8. Certificate of virtual completion

The works shall not be considered as completed until the Engineers-In-Charge has certified in writing that the works have been 'virtually completed' and the guarantee period shall commence from the date of such certificate. Such certificate shall not be issued until all tests as given in clause 19 are carried out to the entire satisfaction of the Engineers-In-Charge or his representative.

9. Insurance in respect of damage to persons and properties

The contractor shall be responsible until the virtual completion of all works for all injury to persons, animals or things and for all structural and decorative damage to property, plant and machinery which may arise from the operation or neglect of himself, or of sub-contractor or any of his sub-contractors employees, whether injury or damage arise from carelessness, accident or any other cause whatever in any way connected with the carrying out of this contract. The contractor shall indemnify the employer and hold him harmless in respect of all and any expenses arising from any such injury or damage under any act of government or otherwise and also in respect of any award of compensation or damage upon such claim.

The contractor shall indemnify the employer with a policy of insurance in the joint names of the employer and the contractor against such risks and deposit such policy or policies with the Engineers-In-Charge from time to time during the currency of this contract.

The contractor shall be responsible for anything which may be excluded from the insurance policies above referred to and also for all other damages to any property arising out of and incidental to the negligent or defective carrying out of this contract.

10. General insurance

The contractor shall at the time of signing the contract insure the works, plant and machinery and keep them insured until the virtual completion of the contract against loss or damage by fire, theft or loss in transit, in an office to be approved by the Engineers-In-Charge, in the joint names of the employer and the contractor (the name of the former being placed first in the policy) for the full amount of the contract.

11. Date of commencement and completion :

The contractor shall be allowed admittance to the site on the 'date of commencement' as stated in the appendix and he shall there upon and forthwith begin the works and shall regularly proceed with and complete the same on or before the date of completion stated in appendix subject nevertheless to the provisions for extension of time hereinafter contained.

12. Damage for non completion

If the contractor fails to complete the works by the date stated in the appendix or within any extended time under clause 14 hereof and the Engineers-In-Charge certifies in writing that in his opinion the same ought reasonably so to have been completed, the contractor shall pay or allow to the employer the sum named in the appendix as 'liquidated damages' for the period during which the said works shall so remain incomplete and the employer may deduct such damage from any moneys due to the contractor.

13. Force measure:

The right of the contractor to proceed with the work shall not be terminated because of any delay in the completion of the work due to unforeseeable causes beyond the control and without the fault or negligence of the contractor, including but not limited to acts of God, or of the public enemy, restraints of a sovereign state, firms, floods, unusually severe weather and act of the employer.

14. Delay and extension of time :

In the opinion of the Engineers-In-Charge the works be delayed :

- A) By force measure.
- B) By reasons of civil commotion, location combination of workers on strike or lock-out affecting any of the building trades.
- C) In consequence of the contractor for not having received in due time necessary instructions from the engineers in-charge for which he shall have specifically applied in writing.
- D) By reasons of Engineers-In-Charge's instructions as per clause 2. The Engineers-In-Charge shall make a fair and reasonable extension of time for completion of the contract works.

In case of such strike or lock-out, the contractor shall, as soon as possible give a written notice thereof to the Engineers-In-Charge, but the contractor shall nevertheless constantly use his endeavors to prevent delay and shall do all that may reasonably be required to the satisfaction of the Engineers-In-Charge to proceed with the work.

15. Clearance of site :

The contractor shall have to remove all malba and other unwanted material from site of work, before handing over Air Conditioning installation to the employer. The work shall not be treated

as complete in all respects unless these requirements are fulfilled by him. In the event of the contractor failing to do so, the architects and the employer shall have right to get the site cleared.

16 Approval from Local Authorities

No objection Certificate if required from the local authorities shall be covered by the contractor. If any official payment is there will be reimbursed by the owner upon receipt of the invoice and clearance from the authority.

17 Contractor's Responsibility

The contractor shall be required to observe all labour laws stipulated by the Central/State government and shall absolve is from any/all responsibilities for the same.

18. Prices :

The prices to be quoted by the intending tenderer shall include the supply and installation, at the site, of all equipment, ancillary material and other items whatsoever required for carrying out the job to fulfil the intent and purpose as laid down in the specifications and/or the drawings. The tenderer's price shall be deemed to include all nuts, bolts, shims, clamps, supports, etc., as required for proper fixing and/or grouting of equipment, ancillary items, etc. Whether specifically mentioned or not. The contractor shall also include, in his price, all taxes, duties or other levies,

(viz., excise duty, customs duty, sales tax, octroi etc.) which are legally livable on AIR CONDITIONING plant and installation.

Failure to include all livable taxes and duties will not entitle the contractor to any extra claims from the employer. The contractor's rates shall remain firm and fixed during the currency of the contract. However, the price shall be subject to adjustment, in case of variation in the rate of excise or customs duty due to an act of legislature, within the originally agreed period for the completion of the work.

19. Assembly and Inspection

Shop assembly of all parts shall be made to ensure that all parts are properly fitted to minimize erection problems.

The purchaser reserves the right to inspect any machinery, material and equipment (hereinafter collectively called "apparatus") finished or used by the contractor under this contract and may reject which is defective in workmanship or design or otherwise unsuitable for the use and purpose intended or which is not in accordance with the intent of this contract. The contractor shall on demand by the purchaser, remedy/replace at the contractor's expenses any such defective or unsuitable apparatus. The contractor shall advise the purchaser in advance when apparatus is ready for inspection in the contractor's workshop and/or in his sub supplier's workshop.

The purchase inspector shall at all times have access to all parts of shop where apparatus is being manufactured and also shall be provided with all reasonable inspection facilities by the contractor and his sub supplier.

None of the apparatus to be furnished or used in connection with this contract will be supplied until shop inspection and performance testing, wherever possible, satisfactory to the purchaser's inspector has been made. Such shop inspection of the apparatus shall not however, relieve the contractor from full responsibility for furnishing the apparatus conforming to the requirements of this contract not prejudice any claim, right or privilege which the purchaser may have because of the supply of defective or unsatisfactory apparatus. Should the purchaser waive the right to inspect any apparatus, such waiver shall not relieve the contractor from his obligation under this contract.

20. Variation in quantities

The quantities for ancillary work given in the drawings and/or specifications are for the guidance of the tenderer. The contractor shall, however, be paid on the basis of actual quantities of works carried out.

21. Working drawing, maintenance manuals etc.

On the award of the work, the contractor shall immediately proceed with the preparation of detailed working drawings detailing the equipment that are to be installed and the ancillary work that are to be carried out. Three sets of all such working drawings shall be submitted to the Engineers-In-Charge for his approval to ensure that the works will be carried out in accordance with the specifications and drawings, including such changes as may have been mutually agreed upon. All the drawings shall be received by the Engineers-In-Charge, for his approval, within 5 days of the award of work. The approval of the drawings by the Engineers- In-Charge, shall in no way relieve the contractor from his obligations to provide a complete and satisfactory plant and installation as per intent and purpose as laid down in the specifications. Any commissions and/or errors shall be made good or rectified whether or not the drawings are approved.

Prior to the completion of the work, the contractor shall furnish to the Employer (4) four sets of a comprehensive manual, describing all components, furnish a list of spare parts and settings forth in details the instructions for the operation and maintenance of the plant.

The contractor shall also fix in the plant room, neatly typed and framed, instructions in details, for the starting and running of the plant.

Any special tools required for the operation or the maintenance of the plant shall be supplied free with the plant.

22. Erection and Commissioning

The contractor shall carry out the complete erection and commissioning. All work shall commence on previously prepared foundation. All the materials shall be moved from their place of storage into the plant by the contractor. The contractor shall make his own arrangement to off load equipment/material received at respective rail/road transport terminal points, dispatched

to site and to store all material received at site. The purchaser shall provide clear storage and erection space only. All erection tools and tackles as and when required to suit the erection program shall be provided by the contractor.

All consumables required for erections such as cotton waste, kerosene, oil, emery paper, coil string, bamboos and planks for scaffolding etc. as well as necessary welding rods, gases etc. shall be provided by the contractor. Protective and finish painting shall be carried out by the contractor. Carbon steel surface shall be thoroughly cleaned before painting. The contractor shall remove all the waste material or rubbish from and about the work site and leave the job thoroughly cleaned up and ready for use.

23. Testing

23.1 All types of routine and type tests shall be carried out at the works of the contractor or the manufacturers of the components. The engineers in-charge shall be free to witness any or all tests if he so desires.

23.2 On the completion of the installation the contractor shall arrange to carry out various initial tests as detailed below, in the presence of and to the complete satisfaction of the Engineers-In-Charge or his representative. Any defects or shortcomings found during the tests shall be speedily rectified or made good by the contractors at his own expense. The initial tests shall include but not be limited to the following :

23.2.1 To test and check the proper functioning of switch gears, safety and other controls to ensure their proper functioning.

23.2.2 To check and adjust the air flow in the ducts.

23.2.3 To check the systems against leaks in different Circuits.

23.2.4 To check the systems for alignment of Motor, V-belt adjustments, control setting and all such other tests which are essential for smooth functioning of the plant.

23.2.5 On the satisfactory completion of all 'initial' tests the plant shall be considered to be 'virtually complete' for the purpose of taking over by the employer.

23.2.6 In addition to the 'initial' test the contractor shall also give one continuous running tests of the plant of 8 hours duration for three day. The running test will be conducted on the completion of the initial test.

23.2.7 The contractor shall provide all necessary tools, instruments, gauges, flow meter, manometer etc., as may be required for conducting the various tests. He shall also provide necessary lubricants, etc., and required personnel for the tests. However, water and power for the tests shall be provided by the employer.

24. Power for installation

The employer shall provide power at one point in the building for proper execution of the work. The contractor shall install his own sub-meter and pay for all electricity consumed by him.

25. Rejection of defective plant :

25.1 If on test any portion of the plant, equipment or components are found to be defective or not fulfilling the intent or the meaning of the specifications, the same shall be replaced or repaired to the entire satisfaction of the Engineers-In-Charge.

25.2 In case the contractor fails to remove the defects, within a period considered reasonable by the Engineers-In-Charge, the employer reserves the right to take necessary remedial measures through other agencies and all expenses thus incurred would be recovered from the contractor.

25.3 The employer reserves the right to operate all the Equipment and complete system, whether or not the plant is taken over after the initial test and commissioning.

Any defects found during the initial or running tests shall be removed at a suitable time as decided upon by the Engineers-In-Charge .

26. Maintenance of the Plant and Training of Personnel

The contractor shall arrange to provide, at no extra cost necessary personnel and material to carry out all routine and special maintenance of the plant as required regularly for a period of (12) twelve months from the date of commissioning.

The contractor shall also train the employer's personnel to operate the plant and carry out routine checks during the period of installation and testing. If found necessary, the employer shall train such personnel at his works at no extra cost to the employer.

27. Completeness of the plant :

The contractor shall provide all required materials, Equipment, ancillary items, etc., to install a complete and satisfactory Air Conditioning plant capable of fulfilling the intent and purpose of the contract, whether or not each and every item is mentioned in the specifications and/or drawings. Any shortcomings notices at any stage shall be made good at no extra cost.

28. Guarantee :

A. The contractor shall guarantee that all the material, Machinery and components supplied, fabricated, designed and installed by him shall be free from defects due to faulty design material and/or workmanship, that the plant shall perform satisfactorily and the efficiency of the specifications and the capacities, shall be at least equal to those specified.

B. The period of the guarantee shall be (12) twelve months from the date of commissioning and handing over of each group of plant during which period of any or all components found to be defective shall be replaced or repaired free of charge and any shortcomings found in the system as

specified shall be removed at no extra cost. The contractor shall provide the necessary personnel and tools for fulfilling the above guarantee.

- C. If for any reason, the first running test cannot be carried out, then the plant shall carry a guarantee for a period of (15) fifteen months from the date of "virtual completion". If the defects are not removed within a reasonable time, the employer may arrange to do so at the contractor's risk and cost, without prejudice to any other rights,

29. Performance Guarantee

The contractor shall guarantee that the capacity of various components as well as the whole system shall not be less than specified. (20 c as benchmark)

30. Painting

All equipment and ancillary items such as pipes, supports etc., will be painted in approved manner, using colour scheme as approved by the architect.

31. Safe Custody and Storage

Safe custody of all machinery and equipment supplied by the contractor shall be his own responsibility till the final taking over by the employer. He should, therefore, employ sufficient staff for watch and ward at his own expenses. The employer may, however, allow the contractor to use the plant room/weather maker/rooms, etc. for temporary storage of his equipment if such spaces are ready and available.

32. Certificate and mode of payment

The contractor shall be paid by the employer two running payment, on obtaining interim work certificate issued by the Engineers-In-Charge, in the manner described below :-

- A) 1st Running bill on completion of Ducting (70% of Ducting work)
- B) 75% of the cost of equipments and components as per BOQ.
- C) Remaining amount payable after completion of installation, testing & commissioning. (excluding the amount of Column D)
- D) Balance 2% amount will be retained for a period of 12 months from the date of virtual completion. This amount may be paid against submission of a bank guarantee of like amount, valid for a period of 12 months from the date of virtual completion.

Appendix

1. Name of work : Air Conditioning System for **CBSE,NICPD, Gurgaon**
2. Commencement of work : -----
3. Defect liability : 12 Months from date of virtual completion period.
4. Payment : -----.
5. Retention amount : 2% of total cost of the Air Conditioning System to be released after defect liability period.

SPECIAL CONDITIONS OF CONTRACT

1. **Prices**

The prices to be quoted by the intending tenderer shall include the supply and installation, at the site, of all component, ancillary material and other items whatsoever required for carrying out the job to fulfil the intent and purposes as laid down in the specifications and/or the drawings.

The tenderer's price shall be deemed to include all components panels, nuts, bolts, shims, clamps, supports etc. as required for proper fixing and/or grouting of equipments, ancillary items etc., whether specifically mentioned or not the contractor shall also include, in his price, all taxes duties or other levies (viz. Excise duty, customs duty, works contract tax, sales tax, octroi etc.) which are legally leviable on air conditioning equipment and Installation. Failure to include

all leviable taxes and duties will not entitle the contractor to any extra claims from the Owner. The contractor's rate shall remain firm and fixed during the currency of the contract. However, the price shall be subject to adjustment, in case of variation in the rate of excise, customs duty due to any act of legislature, within the originally agreed period, for the completion of the work.

2. **Assembly and Inspection**

Shop assembly of all component parts shall be made to ensure that all parts are properly fitted to minimize installation problems.

The Owners reserves the right to inspect any machinery, material and component (hereinafter collectively called "apparatus") finished or used by the contractor under this contract and may reject which is defective in workmanship or design or otherwise unsuitable for the use and purpose intended or which is not in accordance with the intent of this contract. The contractor shall on demand by the Owners, remedy/replace at the contractor's expenses any such defective or unsuitable apparatus. The contractor shall advise the Owners in advance when apparatus is ready for inspection in the contractor's workshop and/or in his sub supplier's workshop.

The Owners Representative shall at all times have access to all parts of shops where apparatus are being manufactured and also shall be provided with all reasonable inspection facilities by the contractor and his sub supplier.

None of the apparatus to be furnished or used in connection with this contract will be supplied until shop inspection and performance testing, wherever possible, satisfactory to the Owners Representative has been made. Such shop inspection of the apparatus shall not however, relieve the contractor from full responsibility for furnishing the apparatus conforming to the requirements of this contract not prejudice any claim, right or privilege which the Owners may have because of the supply of defective or unsatisfactory apparatus. Should the Owners waive the right to inspect any apparatus, such waiver shall not relieve the contractor from his obligation under this contract.

3. **Working Drawings, Maintenance Manuals etc.**

On the award of the work, the contractor shall immediately proceed with the preparation of detailed shop drawings prepared on the computer through the Auto cad system based on the architectural drawings and site measurement, detailing the components that are to be installed and the ancillary works that are to be carried out. Three sets of all such schematic drawings shall be submitted to the Project Managers, for their approval to ensure that the works will be carried out in accordance with the specifications and drawings, including such changes as may have been mutually agreed upon. All the drawings shall be received by the Project Managers for their approval, **within two weeks** of the award of work. The approval of the drawings by the Project Managers shall in no way relieve the contractor from his obligations to provide a complete and satisfactory System and installation as per intent and purpose as laid down in the specifications. Any omissions and/or errors shall be made good or rectified whether or not the

drawings are approved. Prior to the completion of the work, the contractor shall furnish (4) four sets of a comprehensive manual, describing all components, furnishing a list of instructions for the operations and maintenance of the system.

When the Architect makes any amendments in the above drawings, the contractor shall supply two fresh sets of drawings with the amendments duly incorporated along with check prints for approval.

Within four weeks of approval of all the relevant shop drawings, the contractor shall submit four copies of a comprehensive variation in the quantity statement.

The contractor shall also fix in the control room neatly typed and framed, instruction in details, for the starting and running of the system. Any special tools required for the operation or the maintenance of the system shall be supplied free.

4. **Installation and Commissioning**

The contractor shall carry out the complete installation and commissioning. All work shall commence on previously prepared locations for the main and sub systems. All the materials shall be moved from their place of storage into the system by the contractor. The contractor shall make his own arrangement to off load materials received at respective Air/Rail/Road transport terminal points, dispatch to site and to store all material received at site. The Owners shall provide clear storage and installation space only. All installation tools and tackles as and when required to suit the installation programme shall be provided by the contractor.

All consumables required for installations such bamboos and planks for scaffolding etc. shall be provided by the contractor. Protective and finish painting shall be carried out by the contractor. Carbon steel surface shall be thoroughly cleaned painting. The contractor shall indicate the electricity requirements during installation. The contractor shall remove all the waste material or rubbish from and about the work site and leave the job thoroughly cleaned up and ready for use.

5. **Testing**

5.1 All types of routines and type tests as required shall be carried out at the works of the contractor or the manufacturers of the components. The Project Managers/ Consultants shall be free to witness any or all tests, if he so desires.

5.2 On the completion of the installation, the contractors shall arrange to carry out various initial tests as detailed in below, in the presence of and to the complete satisfaction of the Project Managers/Consultants, or their representatives. Any defects or shortcomings found during the tests shall be speedily rectified or made good by the contractor at his own expenses.

5.3 The initial tests shall include but not be limited to the following :

- 5.3.1 To operate and check the proper functioning of all electrically operated components viz compressor motor, Fans.
- 5.3.2 To test and check the switch gears, safety and other controls to ensure their proper functioning.
- 5.3.3 To check the air distribution in the system and to provide design air flow in all the areas specifically shown on the drawings by adjusting the grilles and dampers, which should be provided by the contractor wherever required.

On the satisfactory completion of all 'Initial' tests the system shall be considered to be 'virtually complete' for the purpose of taking over by the Owner.

In addition to the 'Initial' tests the contractor shall also give two continuous operation of test of the system. The tests shall be conducted when the outside ambient conditions are close to the specified ambient conditions. The running tests shall be taken on the completion of the initial tests, provided the ambient conditions are close to the specified ambient conditions.

The contractor shall provide all necessary tools, instruments, gauges, flow meter, ammeter etc. as may be required for conducting the various tests and the required personnel for the tests. However, power for the tests shall be provided by the Owner.

6. **Rejection of Defective System**

If on test any portion of the system or components are found to be defective or not fulfilling the intent or the meaning of the specifications, the same shall be replaced or repaired to the entire satisfaction of the Project Managers/ Consultants.

In case the contractor fails to remove the defects, within a period considered reasonable, the Owner reserves the right to take necessary remedial measures through other agencies and all expenses thus incurred would be recovered from the contractor.

The Owner reserves the right to operate all the equipment and complete system whether or not the plant is taken over after the initial test and commissioning. Any defects found during the initial or running tests shall be removed at a suitable time as decided upon by the Owner and/or their Project Manager/Consultants.

7. **Maintenance of the system and training of personnel**

The contractor shall arrange to provide, at no extra cost necessary personnel and material to carry out all routine and special maintenance of the plant as required, regularly for a period of (12) twelve months (1 year) from the date of commissioning.

The contractor shall also train the Owner's personnel to operate the plant and carry out routine checks during the period of installation and testing. If found necessary, the Owner shall train such personnel at his works at no extra cost to the Owner.

8. **Completeness of the Plant**

The contractor shall provide all the required materials, equipment, ancillary items etc. to install a complete and satisfactory air conditioning system capable of fulfilling the intent and purpose of the contract whether or not each and every item is mentioned in the specifications and/or drawings. Any shortcomings noticed at any stage shall be made good at no extra cost.

The contractor shall also fix in the plant room, neatly typed and framed, instructions in details, for the starting and running of the plant.

Any special tools required for the operation or the maintenance of the plant shall be supplied free with the plant.

9. **Painting**

All equipment and ancillary items such as pipes, supports etc., will be painted in approved manner, using colour scheme as approved by the architect.

10. **Certificate for useful minimum life :**

The contractor shall immediately that the system, equipments provided by them shall perform for a minimum period of 10 years provided it is maintained as per the manufacturer's instructions guidelines & parameters.

11. **Guarantee**

The contractor shall guarantee that all the material, machinery and components supplied, fabricated, designed and installed by him shall be free from defects due to faulty design material and/or workmanship, that the system shall perform satisfactorily and the efficiency and functioning system of the system and all the components shall not be less than the parameters laid down in the specifications and the performance shall be within the specified design limits. In case of any shortcoming the contractor shall replace the necessary components at no extra cost or alternately the Owner shall be entitled to deduct a proportionate amount from payments due to the contractor.

The period of the guarantee shall be (12) twelve months from the date of commissioning during which period any or all components found to be defective shall be replaced or repaired free of charge and any shortcomings found in the system functioning as specified shall be removed at no extra cost. The contractor shall provide the necessary personnel and tools for fulfilling the above guarantee.

If for any reason the commissioning of the system cannot be carried out due to reasons attributable solely to the Owner, then the system shall carry a guarantee for a period of (12) twelve months

from the date of 'virtual completion' - a date which shall be certified by Project Manager/Consultant.

If the defects are not removed within a reasonable time the Owner may arrange to do so at the contractor's risk and cost, without prejudice to any other rights.

12. **Performance Guarantee**

The contractor shall guarantee that the air conditioning system shall maintain the design inside temperature within $\pm 1^{\circ}\text{C}$ tolerance and the relative humidity shall not exceed the specified limit. The Contractor shall guarantee that the capacity of various equipments as well as the whole system shall not be less than specified.

13. **Safe custody and storage**

Safe custody of all equipments supplied by the contractor shall be his own responsibility till the final taking over by the Owner. He should, therefore, employ sufficient staff for watch and ward at his own expenses. The Owner may, however, allow the contractor to use the plant room/weather maker/rooms etc. for temporary storage of his equipment if such spaces are ready and available.

14. **Duration for completion of works**

Duration for completion of works shall be 1 Months after the award of work .

Joint Secretary (A&L)

Contractor

**Price Bid
Schedule of work**

Name of work : SITC of Ductable AC System at NICPD, 76 G, Sec-18, Gurgaon

S.no.	Description	unit	qty.	rate	amount
A	Ductable AC Split Units				
	Providing of Split Air conditioning with evaporator with coil, fan and fan motor, air cooled condenser with reciprocating or rotary compressor, condenser coil, propeller fans, controls, inter connection control panel, mounting frame of angle iron for floor wall mounting condensing unit, canvas connection, complete with fittings, supports valve etc. the suction line shall be insulated with 6 mm thick rubber foam insulation.				
1.1	Ductable Split Unit, 8.5 TR, 3400 CFM of approved make	No.	4		
1.2	Ductable Unit 5.5 TR 2200 CFM of approved make	No.	5		
1.3	Providing & fixing 2.0 TR cassette Unit	No.	1		
2.1	Refrigeration piping with ODU Note : R Piping of 8.5 TR units shall be placed on terrace (appx. 20 Mt. height)	Lot			
3	Drain Piping				
	Supply, installation, testing and commissioning of insulated UPVC condensate water drain piping with bends reducers tees, supports etc. the insulation shall be with pipe sections of un-faced polythene foam of density 32 kg/m ³ wrapped in polythene sheet retained by GI wire netting and finished with two layers of sand cement plaster of 6 mm thick each as per approved drawings and specifications of following sizes :-				
3.1	25 mm dia	Rm	70		
3.2	20 m dia	Rm	60		
4	Air Distribution work GSS ducting				
	supply, fabrication, installation, balancing and commissioning of GSS sheet metal rectangle elbows, slitter dampers, banes, hangers, support etc, as per approved drawing and specifications of following gauges : -				
4.1	24 Gauge (thickness 0.63 mm)	SQM	230		
4.2	22 Gauge	SQM	50		
5	Insulation				
	providing and fixing polythene				

6	Duct Acoustic Lining				
	Duct acoustic lining with glass wool insulation boards, covered with perforated aluminum sheet, nuts, bolts etc.				
6.1	25 mm	SQM	20		
7	Grilles				
	Providing, fixing, testing and commissioning supply and return air grilles as per specifications and drawings including fixing framed of G.I./wooden in false ceiling/walls				
7.1	Aluminium , supply air grill with damper	SQM	20		
7.2	Aluminium return air grill without damper	SQM	30		
8	Diffuser				
	Providing, fixing, testing and commissioning supply and return air diffusers as per specifications and drawings including fixing framed of G.I./ wooden in false ceiling/walls	SQM	rate only		
8.1	Aluminium supply air diffusers with damper	SQM	rate only		
9	Diffuser				
	Providing, fixing, testing and commissioning supply and return air diffusers as per specifications and drawings including fixing framed of G.I./ wooden in false ceiling/walls	SQM	rate only		
	Control Cables	RMT	80		
	Power Cable 4 mm Sq * 4 core	RMT	80		