



TENDER ID: AHM201908011

SBI INFRA MANAGEMENT SOLUTIONS PVT. LTD.
STATE BANK OF INDIA, 3RD FLOOR, LOCAL HEAD OFFICE, BHADRA,
LALDARWAJA, AHMEDABAD-380001

SBIIMS INVITE TENDERS ON BEHALF OF SBI FOR PROPOSED
AIR CONDITIONING WORKS OF CHANGODAR BRANCH DIST: AHMEDABAD
FROM

SBIIMS, AHMEDABAD EMPANELLED AC SUPPLIERS AND MAINTENANCE
CONTRACTORS UNDER CATEGORY UP TO RS.5.0 LAKH AND UP TO RS.20.0
LAKH

PART – A: TECHNICAL BID

TENDER SUBMITTED BY:

NAME : _____

ADDRESS : _____

DATE : _____

ARCHITECT:

AR. DEVDATT M. PANDYA
STUDIO 919 ARCHITECTS
2ND FLOOR/8, AJITNATH SOCIETY
B/S PULKIT HIGH SCHOOL
NR. PALDI POST OFFICE
AHMEDABAD-380 007
PHONE: (079) 26630154
Email: 919studio@gmail.com



NOTICE INVITING TENDERS

SBIIMS on behalf of SBI through its Architect **M/s. STUDIO 919 ARCHITECTS** invites tenders in two bid systems from the SBIIMS, Ahmedabad empanelled AC suppliers and maintenance contractors under category up to Rs.5.0 Lakh and up to Rs.20.0 Lakh.

The details of tender are as under:

S.No.	Description	
1.	Name of work	Proposed Air Conditioning works of State Bank of India Changodar Branch Dist: Ahmedabad
2.	Nature of Work	Air Conditioning Work
3.	Time allowed for completion	(45 days) 1½ Months from date of acceptance of work order.
4.	Application Fees	Rs. 1,000/- Application fees should be paid through SBI Collect only by using SBI Internet Banking web-site www.onlinesbi.com (Detailed flow chart about how to pay tender fees online mentioned below). Online fees payment receipt should be enclosed with the Technical Bid. Application received without online application fees payment receipt shall be rejected.
5.	Earnest Money Deposit	Rs.4,100/- (Four Thousand one Hundred only) by means of Demand Draft / Pay Order (Valid for a period of 180 Days from the last date of submission of the tender) from any scheduled Nationalized Bank drawn in favour of SBI Infra Management Solutions Pvt. Ltd. and payable at Ahmedabad)
6.	Initial Security Deposit	2% of contract amount including EMD
7.	Total Security deposit	5% of the final bill amount including ISD.
8.	Start and end date for downloading of tender documents from Bank's website	14.08.2019 to 21.08.2019 at www.sbi.co.in under<Link>procurement news.
9.	Last date & time for submission of technical bid, EMD and application fess in sealed cover-A and price bid in sealed cover-B	21.08.2019 by 3.00 PM



10.	Address at which technical bid (hard copy) along with EMD & application fees and price bid (hard copy) has to be submitted	Circle Head & Vice President (Civil), SBI Infra Management Solutions Pvt. Ltd. Third Floor, SBI, LHO, Bhadra, Laldarwaja AHMEDABAD-380001
11.	Date and time of opening of technical bid and price bid at SBIIMS, circle office address mentioned at sr. No.10	21.08.2019 at 3:30 PM
12.	Date & time for Submission of online indicative price bid.	Not applicable
13.	Date & time for opening of online indicative price bid.	NA
14.	Date & time for e-reverse auction	NA.
15.	Liquidated Damages	0.50% of contract amount per weeks subject to max. 5% of contract value or final bill value.
16.	Defects liability period	12 Months from the date of Virtual Completion
17.	Validity of offer	90 days from the date of opening of Price-bid
18.	Value of Interim Certificate	NO INTERIM
19.	Insurance	The contractor shall obtain all necessary insurance policies as per the law applicable at the centre & shall be required to produce the original policies and receipt of the premium applicable in the matter to the Architect/Bank.
20.	Water & electricity	Water & Electricity shall be provided by the Bank at one point. However further distribution & extension & light fixture etc. with required MCB switches, switch boards, lamps, tube, etc. shall be arranged by the contractor at their own cost within the accepted tender cost. Bank will recover 0.5% of final bill amount consumption of water & electricity.

21. The contractor shall submit the tender in two bid system kept in separate covers.
Part A- Technical bid (Cover-A) shall contain the following documents:
- Forwarding letter.
 - NIT cum draft tender stamped and signed on each paper.
 - Bill of quantities stamped and signed on each paper.
 - Set of all drawings stamped and signed.
 - Online fees payment receipt should be enclosed with the Technical Bid.
Application received without online application fees payment receipt shall be rejected.



- f. Banker cheque/ DD of Rs. 4,100/- (Rupees Four Thousand one hundred only) as EMD (Refundable) favoring SBI Infra Management Solutions Pvt Ltd, payable at Ahmedabad.

Part B- Financial bid (Cover-B) shall contain the Price bid only.

Both the covers shall be kept in a large cover and it shall be send to the address as Mentioned in Para 10 above.

22. Tenders can be downloaded from the bank's website www.sbi.co.in (link) <Procurement News>. It shall be responsibility of the contractor to arrange and ensure that all pages of technical and financial bid are properly bound separately. Tenders in loose pages may be disqualified.
23. The contractor shall sign and stamp each page of the tender document thereby ensuring the number and sequence of all pages.
24. No conditions other than mentioned in the tender will be considered, and if given they will have to be withdrawn before opening of the price-bid.
25. The SBIIMS reserve their rights to accept or reject any or all the tenders, either in whole or in part without assigning any reason for doing so and any claim / correspondence shall be entertained in this regard.
26. Tenders received without EMD and Application Fees shall be summarily rejected and such tenders shall not be allowed to participate in the online price bidding process.
27. In case the date of opening of tenders is declared as a holiday, the tenders will be opened on the next working day at the same time.
28. SBIIMS has the right to accept / reject any / all tenders without assigning any reasons and no correspondence shall be entertained in this regard.

Yours Faithfully,

For:

AR. DEVDATT M. PANDYA

STUDIO 919 ARCHITECTS

2ND FLOOR/8, AJITNATH SOCIETY

B/S PULKIT HIGH SCHOOL

NR. PALDI POST OFFICE

AHMEDABAD-380 007

PHONE: (079) 26630154 Email: 919studio@gmail.com



HOW TO MAKE ONLINE APPLICATION FEES

Go to SBI Internet Banking web site-<https://www.onlinesbi.com/>



Select SBI Collect from Top Menu



Click Check box to Proceed



Select "All India " in state Corporate/Institution and "Commercial Services" in type of Corporate / Institution after that click go



Select " SBI INFRA MANAGEMENT SOLUTIONS PVT. LTD." IN Commercial Services Name and Submit



Select "Tender Application Fee" in Payment category and Enter "Tender ID " and Submit



The Vendor will have to fill up the fields properly and submit upon making the payment a receipt will be generated with a reference no. on submit. The Contractor/Supplier has to enclose the online payment receipt along with the empanelment application.



(i) Category up to Rs. 5.0 Lakh (S-1)

S No	Name of Applicant
1	M/s MD Aircon, A-116, Ashwamegh Complex, Opp. Sayaji Vihar Club, Raj Mahal Road, VADODARA-390 001, PH-02652427082, e-mail:mdaircon@gmail.com
2	M/s Opra Power System, 22, S.G. Mall, Opp. Home Town, Thaltej, Ahmedabad-380 059, PH-07926880212, e-mail-optrapowersystem@gmail.com
3	M/s Shree Maruti AC Services, S/B, 42, Paradise Complex, Sayajiganj, Vadodara-05, PH-9998486570, e-mail-shreemarutiacservic2014@gmail.com
4	M/s Power Control, 503, Ashwamegh Elegance, Bhudarpura Rd., Nr Kalyan Jewelers, Ambawadi, Ahmedabad-06, PH-07940022404, e-mail-info@powercontrol.com
5	Patel Electricals 1/A Aastha Complex, Nr. Sanskarmandal Chowk, Talaja Road, Bhavnagar. Ph: 0278-2225584, (M)9374754747,9825088095 Email: patelectricals55@gmail.com
6	S.M Enterprise 23, Central Government Housing Society,Nr. MGM School, New Sama Road, Vadodara. (M)9879562994, 8401497038. Email: ajaytondon2010@gmail.com
7	Prince Enterprise 60, Maruti Plaza, Nr. Vijay Park BRTS, Sardar Chowk Road,Krishnanagar, Naroda, Ahmedabad. (M)9979861449,9979859049 Email: princeenterprise18@gmail.com

(ii) Category up to Rs.20 Lakh (S-2):

1	M/s Pranam Technologies., A-405/406, 4TH Floor, Neel Kanth Palace, 100 Ft, Anand Nagar Road, Opp. Seema Hall, Satellite, Ahmedabad-380015 PH-07926933579 e-mail: pranamhvac@gmail.com
2	M/s Foram HVAC, g-11, Kavita Complex-B, Times of India Road, Nr. Shyamal Cross Rd., Satellite, Ahmedabad-380 015, PH-07926730218, e-mail-foramengg@gmail.com
3	M/s HCP Enterprise, A-8, Someshwar Tenament, Nr. Nishan School, Ranip, Ahmedabad-382480, m-9979775742, e-mail-hcpcenterprise@gmail.com
4	M/s Vrinda Air Condition Solution, C-1060, Central Bazar, Opp. Varachha Police Station, Varachha Rd., Surat, PH-9824732305, e-mail-vrinda_ac@yahoo.com
5	M/s Shaina Cooling Systems, 7/2077,78,86, 404, 4th Floor, Al. Mehfuz Appt., Rampura, Surat-395003, PH-9898140380
6	M/s Maimoon Aircon, 101, Relax Apartment, Haldiya Sheri, Navsari Bazar, Sangrampura, Surat, Mob-9824392576, e-mail-maimoonsales52@gmail.com
7	M/s Concept Marketing, "Concept Arena", Payal Park Soc., Nr. TVS Motors, Opp. Central Excise Bhavan, B/H Subhanpura Garden, Subhanpura, Vadodara-390023, PH-02652391348, e-mail-manan@concept.net.in
8	CHILL-AIR SYSTEMS 1&2, Induchacha House, Chhani Jakat Naka, Chhani, Vadodara-390024, ph: 0265-2773729/2761022, (M)9825603471/9825083471, Email: chillairsystems@gmail.com, chillair.krunal@gmail.com
9	Cool Air Enterprise Opp. 13 Ramnathpara, Garud Garbi Chowk, Rajkot-360001, (M)9426165786, Email: coolair9@gmail.com



10	Sharda Refrigeration Travels, Rubber Factory Circle, Bhavnagar-364001, (M)9426261853	Shop No-35, Suryadarshan Complex, Opp. Tanna Ph: 0278-2510479, Email: thomasvyas@yahoo.co.in
11	Real Enterprise Road,Nr. Kotecha School, Off. Amin Marg, Rajkot-360005, Ph: 0281-2474753, 2474759, (M)9825189029, realenterprise97@gmail.com	First Floor, 104-Panchshil Plaza, Kotechanagar Main Email:
12	Milestone Engineers Station, Nr. 132 Feet Ring Road, Naranpura , Ahmedabad-380013, 27456155, (M)9727773330,	6, Ground Floor, Binali Complex, Opp. Torrent Power Sub Ph: 079- Email: care@milestoneengineers.com
13	System Designing Vasna, Ahmedabad-380007 Email: sdesign_trs@yahoo.com	102, Aagam Complex, Nr. Pratapkunj Busstand, Ph:-07926631673, (M)9825024651,7600880736
14	Himanshu Sales 079-40070200, (M)9924464218,	15, Binali Complex, Naranpura, Ahmedabad Ph- Email: himanshusales15@gmail.com



FORM TENDER

To,
The Circle Head & VP (Civil),
Circle Office,
SBI Infra Management Solutions Pvt. Ltd.,
Ahmedabad- 380001.

Dear Sir,

Having examined the drawings, specification, design and schedule of quantities relating to the works specified in the memorandum hereinafter set out and having visited and examined the site of the works specified in the said memorandum and having acquired the requisite information relating thereto as affecting the tender, I/We hereby offer to execute the works specified in the said memorandum at the rates mentioned in the attached Schedule of Quantities and in accordance in all respects with the specifications, design, drawings and instructions in writing referred to in conditions of tender, the Articles of Agreement, Special Conditions, Schedule of Quantities and Conditions of Contract and with such materials as are provided for by, and in all other respects in accordance with such conditions so far as they may be applicable.

MEMORANDUM

Description of work	Proposed Air Conditioning works of Changodar Branch Dist: Ahmedabad
Earnest Money	Rs. 4,100.00 - (Four Thousand one Hundred only) by means of Demand Draft / Pay Order from any scheduled Nationalized Bank drawn in favour of SBI Infra Management Solutions Pvt Ltd, payable at Ahmedabad.
Percentage, if any, to be deducted from Bills and total amount to be retained	10 % from Running Bills, subject to maximum Total 5% of contract amount or actual Final Bill value including EMD & Initial Security Deposit.
Time allowed for completion of the Works from fourteenth day after the date of written order or date of handing over of the site (whichever is later) to commence the work	1 ½ (One & half) months (45 days)

I/We have deposited a sum of **Rs.4,100/- (Four Thousand one Hundred only)** of the total tender amount as Earnest Money with the SBI Infra which is not to bear any interest. Should I / We fail to execute the Contract when called upon to do so I/ We do hereby agree that this sum shall be forfeited by me/us to SBI Infra Management Solutions Pvt. Ltd.



1) Our Bankers are: i)

ii)

The names of partners of our firm are: i)

ii)

Name of the partner of the firm Authorized to sign

Or

(Name of person having Power of Attorney to sign the Contract.)

(Certified true copy of the Power of Attorney should be attached)

Yours faithfully,

Signature of Contractors.

Signature and addresses of Witnesses

i)

i



ARTICLES OF AGREEMENT

(On non-judicial Stamp Paper of Rs. 500/- or as per latest Govt. Rules)

ARTICLES OF AGREEMENT made the _____ date of _____ between SBIIMS PVT. LTD., on behalf of SBI, having its office at Mumbai herein after called "the Service Provider" of the One Part and WHEREAS the SBIIMS PVT.LTD. is desirous of

and has caused drawings and specifications describing the work to be done to be prepared by **M/s. Studio919 Architects**, its Architects.

AND WHERE AS the said Drawings numbered _____ to _____ inclusive, the Specifications and the Schedule of Quantities have been signed by or on behalf of the parties hereto.

AND WHEREAS the Contractor has agreed to execute upon and subject to the Conditions set forth herein and to the Conditions set forth herein in the Special Conditions and in the Schedule of Quantities and Conditions of Contract (all of which are collectively hereinafter referred to as "the said conditions") the works shown upon the said Drawings and / or described in the said Specifications and included in the Schedule of Quantities at the respective rates therein set forth amounting to the sum as therein arrived at our such other sum as shall become payable there under (hereinafter referred to as "the said Contract Amount.)

NOW IT IS HEREBY AGREED AS FOLLOWS:

- 1) In consideration of the said Contract Amount to be paid at the times and in the manner set forth in the said Conditions, the Contractor shall upon and subject to the said Conditions execute and complete the work shown upon the said Drawings and described in the said Specifications and the priced Schedule of Quantities.
- 2) The Employer shall pay to the Contractor, the said Contract Amount, or such other sum as shall become payable, at the times and in the manner specified in the said Conditions.

The term "the Architects" in the said Conditions shall mean the **M/s. Studio919 Architects**, or in the event of their ceasing to be the Architects for the purpose of this Contract for whatever reason, such other person or persons as shall be nominated for that purpose by the Employer, not being a person to whom the Contractor shall object for reasons considered to be sufficient by the Employer, PROVIDED ALWAYS that no person or persons subsequently appointed to be Architects under this Contract shall be entitled to disregard or overrule any previous decisions or approval or direction given or



expressed in writing by the outgoing Architects for the time being.

- 3) The said Conditions and Appendix thereto shall be read and construed as forming part of this Agreement, and the parties hereto shall respectively abide by submit themselves to the said Conditions and perform the Agreements on their part respectively in the said Conditions contained.
- 4) The Plans, Agreements and Documents mentioned herein shall form the basis of this Contract.
- 5) This Contract is neither a fixed lump-sum contract nor a piece work contract but a contract to carry out the work in respect of the entire building complex to be paid for according to actual measured quantities at the rates contained in the Schedule of Quantities and Rates or as provided in the said Conditions.
- 6) The Contractor shall afford every reasonable facility for the carrying out of all works relating to AIR CONDITIONING works, installation of lifts, Telephone, electrical installations, fittings air-conditioning and other ancillary works in the manner laid down in the said Conditions, and shall make good any damages done to walls, floors, etc. after the completion of his work.
- 7) The SBIIMS reserves to itself the right of altering the drawings and nature of the work by adding to or omitting any items of work or having portions of the same carried out without prejudice to this Contract.
- 8) Time shall be considered as the essence of this Contract and the Contractor hereby agrees to commence the work soon after the Site is handed over to him or from the date of issue of formal work order as provided for in the said Conditions whichever is later and to complete the entire work within **45 days** subject to nevertheless the provisions for extension of time.
- 9) All payments by the SBI under this contract will be made only at Ahmedabad.
- 10) All disputes arising out of or in any way connected with this agreement shall be deemed to have arisen at Ahmedabad and only the courts in Ahmedabad shall have jurisdiction to determine the same.
- 11) That the several parts of this Contract have been read by the Contractor and fully understood by the Contractor.

IN WITNESS WHERE OF THE SBIIMS and the Contractor have set their respective hands to these presents and two duplicates hereof the day and year first hereinabove written.

SIGNATURE CLAUSE

SIGNED AND DELIVERED by the



_____ By the (Employer)

hand of Shri _____

(Name and Designation) In the

(Signature of Employer)

presence of:

1) Shri /Smt. _

(Signature of Witness)

Address _____

(Witness)

SIGNED AND DELIVERED by the

_____ By the
(Contractor)

(Signature of Contractors)

in the presence of:

Shri/ Smt. _____

(Signature of Witness)

Address _____

(Witness)



SECTION – 1

INSTRUCTIONS TO THE TENDERERS

1.0 Scope of work

Sealed Tenders are invited **by M/s Studio919 Architects, Ahmedabad** for and behalf of SBI / SBIIMSPL for the work of Proposed Air Conditioning works for Changodar Branch Dist: Ahmedabad.

Site and its location

The proposed work is to be carried out at Changodar Branch Dist: Ahmedabad.

Tender documents

- 2.0** The work has to be carried out strictly according to the conditions stipulated in the tender consisting of the following documents and the most workmen like manner.

Instructions to tenderers

General conditions of Contract

Special conditions of Contract

Additional Specifications

Drawings

Priced bid A

- 2.1** The above documents shall be taken as complementary and mutually explanatory of one another but in case of ambiguities or discrepancies, shall take precedence in the order given below;

- a) Price Bid
- b) Additional Specifications
- c) Technical specifications
- d) Drawings
- e) Special conditions of contract
- f) General conditions of contract
- g) Instructions to Tenderers

- 2.2** Complete set of tender documents including relative drawings can be downloaded from the website www.sbi.co.in

- 2.3** The tender documents are not transferable.



3.0 Site Visit:

3.1 The tenderer must obtain himself on his own responsibility and his own expenses all information and data that may be required for the purpose of filling this tender document and enter into a contract for the satisfactory performance of the work. The tenderer is requested satisfy himself regarding the availability of water, power, transport and communication facilities, the character quality and quantity of the materials, labour, the law and order situation, climatic conditions local authorities requirement, traffic regulations etc; The tenderer will be fully responsible for considering the financial effect of any or all the factors while submitting his tender.

4.0 Earnest Money:

4.1 The tenderers are requested to submit the Earnest Money of **Rs 4,100/- (Rupees Four Thousand one Hundred only) by means of Demand Draft/Pay Order**(Valid for a period of 180 Days from the last date of submission of the tender) from any scheduled Nationalized Bank drawn **in favor of SBI Infra Management Solutions Pvt Ltd, payable at Ahmedabad.**

4.2 EMD in any other form other than as specified above will not be accepted. Tender not accompanied by the EMD in accordance with clause 4.1 above shall be rejected.

4.3 No interest will be paid on the EMD.

4.4 EMD of unsuccessful tenderer will be refunded within 30 days of award of Contract.

4.5 EMD of successful tenderer will be retained as a part of security deposit.

5.0 Initial Security Deposit:

The successful tenderer will have to submit a sum equivalent to 2% of accepted tender value less EMD by means of DD drawn in favour of SBIIMS Payable at Ahmedabad within a period of 7 days of acceptance of tender.

5.1 Security Deposit:

Total security deposit shall be 5% of contract value. Out of this 2% of contract value is in the form of Initial Security Deposit (ISD) which includes the EMD. Balance 3% shall be deducted from the running account bill of the work at the rate of 10% of the respective running account bill i.e., deduction from each running bill account will be @ 10% till Total Security Deposit (TSD) including ISD reaches to 5% of contract value. The 50% of the Total Security Deposit shall be paid to the contract on the basis of architect's certifying the virtual completion. The balance 50% would be paid to the contractors after the defects liability period as specified in the contract.



5.2 Additional Security Deposit:

In case L-1 bidder quotes abnormally low rates (i.e. 10% or more, below estimated project cost), the bank may ask such bidder to deposit additional security deposit (ASD) equivalent to difference of estimated cost vis-à-vis L-1 quoted amount for due fulfillment of contract. Such ASD could be in the joint name of the Bank and bidder in the form of FDR / Bank's guarantee as per format approved by the Bank. On successful completion of work ASD will be returned to the contractor. In case contractor fails to complete the work in time or as per tender specification or leave the job incomplete, the bank will be at liberty to recover the dues from ASD or to forfeit such ASD as the case may be within its sole discretion.

No interest shall be paid to the amount retained by the Bank as Security Deposit for the defect liability period of one year from the date virtual completion certificate (VCC). However, interest on FDR for additional security deposit will be received by the bidder.

5.3 Signing of contract Documents:

The successful tenderer shall be bound to implement the contract by signing an agreement and conditions of contract attached herewith within 15 days from the receipt of intimation of acceptance of the tender by the Bank. However, the written acceptance of the tenders by the Bank will constitute a binding agreement between the Bank and successful tenderer whether such formal agreement is subsequently entered in to or not.

6.0 Completion Period:

Time is essence of the contract. The work should be completed in all respect accordance with the terms of contract within a period of **45 days** from the date of award of work.

7.0 Validity of tender:

Tenders shall remain valid and open for acceptance for a period of 90 days from the date of e-reverse auction. If the tenderer withdraws his/her offer during the value period or makes modifications in his/her original offer which are not acceptable to Bank without prejudice to any other right or remedy the Bank shall be at liberty forfeit the EMD.

8.0 Liquidated Damages:

The liquidated damages shall be 0.50% per week subject to a maximum of 5% of contract value.

9.0 Rate and prices:

9.0.1 In case of item rate tender:

The tenderers shall quote their rates for individual items both in words and figure. In case of discrepancy between the rate quoted in words and figures, the unit rate quantity



in words will prevail. If no rate is quoted for a particular item the contractor shall not be paid for that item when it is executed. The amount of each item shall be calculated and the requisite total is given. In case of discrepancy between the unit rate and the total amount calculated from multiplication of unit rate and the quantity the unit rate quoted will govern and the amount will be corrected.

The tenderers need not quote their rates for which no quantities have been given. In case the tenderers quote their rates for such items those rates will be ignored and will not be considered during execution.

The tenderers should not change the units as specified in the tender. If any unit is changed the tenders would be evaluated as per the original unit and the contractor would be paid accordingly. The tenderer should not change or modify or delete the description of the item. If any discrepancy is observed he should immediately bring to the knowledge of the Architect/ SBIIMS Each page of the BOQ shall be signed by the authorized person and cutting or over writing shall be duly attested by him.

Each page shall be totaled and the grand total shall be given.

The rate quoted shall be firm and shall include all costs, allowances, materials, labours, taxes etc. except G.S.T, which shall be payable / reimbursed at actual

The SBIIMS reserve their rights to accept any tenders, either in whole or in part or may entrust the work in phases or may drop the part scope of work at any stage of the project within its sole discretion without assigning any reason(s) for doing so and no claim / correspondence shall be entertained in this regard.

10.0 Material having basic price: If the basic rate of any material actually used for the work is more or less then the basic rate given in schedule of quantities, in the case the difference will be calculated (either plus or minus) and shall be paid or recovered from the contractor. GST shall be excluded from the basic rate and will include all other taxes, transportation, loading, unloading, etc complete in all respect. Rates should be however, fair and competitive and verified by market enquiry by the bank and the quantity purchased in every period should be reasonable and advantageous, if any due to bulk purchase may be also taken into account.

The SBIIMS Pvt. Ltd. Reserve their rights to accept any tenders, either in whole or in part or may entrust the work in phases or may drop the part scope of work at any stage of the project within its sole discretion without assigning any reason(s) for doing so and no claim/correspondence shall be entertained in this regard.

SIGNATURE OF THE CONTRACTOR WITH SEAL



GENERAL CONDITIONS OF CONTRACT

1.0 Definitions:-

“Contract means the documents forming the tender and the acceptance thereof and the formal agreement executed between SBI Infra Management Solutions Pvt. Ltd. (client) and the contractor, together with the documents referred there in including these conditions, the specifications, designs, drawings and instructions issued from time to time by the Architects / Bank and all these documents taken together shall be deemed to form one contract and shall be complementary to one another.

In the contract the following expressions shall, unless the context otherwise requires, have the meaning hereby respectively assigned to them.

1.0.1 ‘SBIIMS’ shall mean SBI Infra Management Solutions Pvt. Ltd.(Project Management Services Provider-PMS) having its Circle Office at Third Floor, SBI, LHO, Bhadra, Laldarwaja, Ahmedabad-380001 and includes the client’s representatives, successors and assigns.

1.0.2 ‘Architects/ Consultants’ shall mean **M/s Studio919 Architects**, Architects & Interior Designers, Ahmedabad.

1.0.3 ‘Site Engineer’ shall mean an Engineer appointed by the SBIIMS at site as their representative for day-to-day supervision of work and to give instructions to the contractors.

1.0.4 ‘The Contractor’ shall mean the individual or firm or company whether incorporate not, undertaking the works and shall include legal personal representative of individual or the composing the firm or company and the permitted assignees of individual or firms of company.

The expression ‘works’ or ‘work’ shall mean the permanent or temporary work description in the “Scope of work” and/or to be executed in accordance with the contract includes materials, apparatus, equipment, temporary supports, fittings and things of kinds to be provided, the obligations of the contractor hereunder and work to be done by the contractor under the contract.

1.0.5 ‘Engineer’ shall mean the representative of the Architect/consultant.

1.0.6 ‘Drawings’ shall mean the drawings prepared by the Architects and issued by the Engineer and refer red to in the specifications and any modifications of such drawings as may be issued by the Engineer from time to time Contract value shall mean value of the entire work as stipulated in the letter of acceptance of tender subject such additions there to or deductions there from as may be made under the provide herein after



contained.

1.0.7 Specifications' shall mean the specifications referred to in the tender and modifications thereof as may time to time be furnished or approved by the Architect/Consultant.

1.0.8 "Month" means calendar month.

1.0.9 "Week" means seven consecutive days.

1.0.10 "Day" means a calendar day beginning and ending at 00 Hrs and 24 Hrs respectively.

1.1.11 "SBIIMS's Engineer" shall mean The AIR CONDITIONING/Electrical Engineer in-charge of the Project, as nominated by the Circle Head and Vice President, SBIIMS, Ahmedabad

1.1.12 The following shall constitute the Joint Project Committee (herein under referred to as JPC) for assessing and reviewing the progress of the work on the project and to issue instructions or directions from time to time for being observed and followed by the Architects Site Engineer / PMC and other consultants / contractors engaged in the execution of the project.

- i) Vice President – Circle Head of SBIIMS
- ii) SBIIMS Engineer (AIR CONDITIONING and Electrical) in-charge of the Project
- iii) Concerned partner of the Architects and their Resident Architect Member.

CLAUSE

1.0 Total Security Deposit

Total Security deposit comprise of Earnest Money Deposit, Initial security deposit and Retention Money

1.1 Earnest Money Deposit-

The tenderer shall furnish EMD of **Rs. 4,100/- (Rupees Four Thousand one Hundred only)** in the form of Demand draft or bankers cheque drawn in favour of SBI Infra Management Solutions Pvt Ltd, payable at Ahmedabad. on any Scheduled Bank. No tender shall be considered unless the EMD is so deposited in the required form. No interest shall be paid on this EMD. The EMD of the unsuccessful tenderer shall be refunded soon after the decision to award the contract is taken without interest. The EMD shall stand absolutely forfeited if the tenderer revokes his tender at any time the period when he is required to keep his tender open acceptance by the SBIIMS or after it is accepted by the SBIIMS, the contractor fails to enter into a formal agreement or fails to pay the initial security deposit as stipulated or fails to commence the commence the work within the stipulated time.

1.2 Initial Security Deposit (ISD)



The amount of ISD shall be 2% of accepted value of tender including the EMD in the form of DD/Fixed Deposit Receipt (FDR) drawn on any scheduled Bank and shall be deposited within 15 days from the date of acceptance of tender.

1.3 ADDITIONAL SECURITY DEPOSIT / PERFORMANCE GUARANTEE

In case L-1 bidder quotes abnormally low rates (i.e. 10% or more, below estimated project cost), the bank may ask such bidder to deposit additional security deposit (ASD) equivalent to difference of estimated cost vis-à-vis L-1 quoted amount for due fulfillment of contract. Such ASD could be in the joint name of the Bank and bidder in the form of FDR / Bank's guarantee as per format approved by the Bank. On successful completion of work ASD will be returned to the contractor. In case contractor fails to complete the work in time or as per tender specification or leave the job incomplete, the bank will be at liberty to recover the dues from ASD or to forfeit such ASD as the case may be within its sole discretion.

No interest shall be paid to the amount retained by the Bank as Security Deposit for the defect liability period of one year from the date virtual completion certificate (VCC). However, interest on FDR for additional security deposit will be received by the bidder.

1.4 Retention Money:

Besides the SD as deposited by the contractor in the above said manner, the Retention money shall be deducted from the running account bill at the rate of 10% of the gross value of work done by the contractor and claimed in each bill provided the total security deposit i.e. ISD plus EMD plus Retention Money shall both together not exceed 5% of the contract value. The 50% of the total security deposit shall be refunded to the contractor without any interest on issue of Virtual Completion certificate by the Architect/consultant. The balance 50% of the total security deposit shall be refunded to the contractors without interest within fifteen days after the end of defects liability period provided the contractor has satisfactorily attended to all defects in accordance with the conditions of contract including site clearance.

2.0 Language:

The language in which the contract documents shall be drawn shall be in English.

3.0 Errors, omissions and discrepancies:

In case of errors, omissions and/ or disagreement between written and scaled dimensions on the drawings or between the drawings and specifications etc., the following order shall apply.

- i) Between scaled and written dimension (or description) on a drawing, the latter shall be adopted.
- ii) Between the written or shown description or dimensions in the drawings and the



corresponding one in the specification the former shall be taken as correct.

- iii) Between written description of the item in the specifications and descriptions in bills of quantities of the same item, the former shall be adopted:
 - a) In case of difference between rates written in figures and words, the rate in words shall prevail.
 - b) Between the duplicate / subsequent copies of the tender, the original tender shall be taken as correct.

4.0 Scope of Work:

The contractor shall carry out complete and maintain the said work in every respect strictly accordance with this contract and with the directions of and to the satisfaction Bank to be communicated through the architect/consultant. The architect/consultant at the directions of the SBIIMS from time to time issue further drawings and / or write instructions, details directions and explanations which are here after collectively references to as Architect's / consultant's instructions in regard to the variation or modification of the design, quality or quantity of any work or the addition or omission or substitution work. Any discrepancy in the drawings or between BOQ and / or drawings and/or specifications. The removal from the site of any material brought thereon by the Contractor and any substitution of any other materials therefore the removal and/or re-execution of any work executed by him. The dismissal from the work of any person engaged the re upon.

5.0 i) Letter of Acceptance:

Within the validity period of the tender the SBIIMS shall issue a letter of acceptance directly or through the architect by registered post or otherwise depositing at the of the contractor as given in the tender to enter into a Contract for the execution of the work as per the terms of the tender. The letter of acceptance shall constitute a bind contract between the SBIIMS and the contractor.

ii) Contract Agreement:

On receipt of intimation of the acceptance of tender from the SBIIMS /Architect the successful tenderer shall be bound to implement the contract and within fifteen days there of shall sign an agreement in a non-judicial stamp paper of appropriate value.

6.0 Ownership of drawings:

All drawings, specifications and copies thereof furnished by the SBIIMS / SBI through its Architect / consultants are the properties of the SBIIMS They are not to be used on other work.

7.0 Detailed drawings and instructions:



The SBIIMS through its architects / consultants shall furnish with reasonable proper additional instructions by means of drawings or otherwise necessary for the execution of the work. All such drawings and instructions shall be consistent with contract documents, true developments thereof and reasonably inferable there.

The work shall be executed in conformity there with and the contractor prepare a detailed program schedule indicating therein the date of start and completion of various activities on receipt of the work order and submit the same to the SBIIMS through the architect/consultant

7(a) Copies of agreement:

Two copies of agreement duly signed by both the parties with the drawings shall be handed over to the contractors.

8.0 Liquidated damages:

If the contractor fails to maintain the required progress in terms of clause 6.0 of GOC or to complete the work and clear the site including vacating their office on or before the contracted or extended date or completion, without justification in support of the cause of delay, he may be called upon without prejudice to any other right of remedy available under the law to the SBIIMS on account of such breach to pay a liquidated damages at the rate of 0.50% of the contract value which subject to a maximum of 5% of the contract value.

9.0 Materials, Appliances and Employees:

Unless or otherwise specified the contractor shall provide and pay for all materials, labour, water, power, tools, equipment transportation and any other facilities that are required for the satisfactory execution and completion of the work. Unless or otherwise specified all materials shall be new and both workmanship and materials shall be best quality. The contractor shall at all times enforce strict discipline and good order among his employees and shall not employ on the work any unfit person or anyone not skilled in the work assigned to him. Workman whose work or behavior is found to be unsatisfactory by the SBIIMS /Architect/ consultant he shall be removed from the site immediately.

10.0 Permits, Laws and Regulations:

Permits and licenses required for the execution of the work shall be obtained by the contractor at his own expenses. The contractor shall give notices and comply with the regulations, laws, and ordinances rules, applicable to the contract. If the contractor observes any discrepancy between the drawings and specifications, he shall promptly notify the SBIIMS in writing under intimation of the Architect/ Consultant. If the contractor performs any act, which is against the law, rules and regulations he shall meet all the costs arising the reform and shall indemnify the SBIIMS any legal actions arising there from.



11.0 Setting out Work:

The contractor shall set out the work and shall be responsible for the true and perfect setting out of the same and for the correctness of the positions, levels, dimensions, and alignment of all parts thereof and get it approved by the architect / consultant before proceeding with the work. If at any time any error in this respect shall appear during the progress of the works, irrespective of the fact that the layout had been approved by, the architect / consultant the contractor shall be responsible for the same and shall his own expenses rectify such error, if so, required to satisfaction of the SBIIMS

12.0 Protection of works and property:

The contractor shall continuously maintain adequate protection. Of all his work from damage and shall protect the SBI's properties from injury or loss arising in connection with contract. He shall make good any such damage, injury, loss, except due to causes beyond his control and due to his fault or negligence.

He shall take adequate care and steps for protection of the adjacent properties. The contractor shall take all precautions for safety and protections of his employees on the works and shall comply with all applicable provisions of Govt. and local bodies' safety laws and building codes to prevent accidents, or injuries to persons or property on about or adjacent to his place of work. The contractor shall take insurance covers as per clause at his own cost. The policy may be taken in joint names of the contractor and the SBIIMS and the original policy may be lodged with the SBIIMS

13.0 Inspection of work:

The SBIIMS / Architect / Consultant or their representatives shall at all reasonable times have free access to the work site and / or to the workshop, factories, or other places where materials are lying or from where they are obtained and the contractor shall give every facility to the SBIIMS/Architect/consultant and their representatives necessary for inspection and examination and test of the materials and workmanship. No person unless authorized by the SBIIMS/ Architect /Consultant except the representative of Public authorities shall be allowed on the work at any time. The proposed work either during its construction stage or its completion can also be inspected by the Chief Technical Examiner's Organization a wing of Central Vigilance commission.

14.0 Assignment and subletting:

The whole of work included in the contract shall be executed the contractor and he shall not directly entrust and engage or indirectly transfer, assign or underlet the contract or any part or share there of or interest therein without the written consent of the SBIIMS through the Architect and no undertaking shall relieve the contractor from the responsibility of the contractor from active & superintendence of the work during its progress.

15.0 Quality of materials, workmanship &Test:



All materials and workmanship shall be best of the respective kinds described in the contract and in accordance with Architect/consultant instructions and shall be subject from time to time to such tests as the architect/consultant may direct at the place of manufacture or fabrication or on the site or an approved testing laboratory. The contractor shall provide such assistance, instruments, machinery, labor, and materials as are normally required for examining measuring sampling and testing any material or part of work before in corporation in the work for testing as may be selected and required by the architect/consultant.

ii) Samples:

All samples of adequate numbers, size, shades & pattern as per specifications shall be supplied by the contractor without any extra charges. If certain items proposed to be used are of such nature that samples cannot be presented or prepared at the site detailed literature / test certificate of the same shall be provided to the satisfaction of the Architect/consultant before submitting the sample/literature the contractor shall satisfy himself that the material / equipment for which he is submitting the sample / literature meet with the requirement of tender specification. Only when the samples are approved in writing by the architect/consultant the contractor shall proceed with the procurement and installation of the particular material / equipment. The approved samples shall be signed by the Architect / Consultant for identification and shall be kept on record at site office until the completion of the work for inspection / comparison at any time. The Architect/Consultant shall take reasonable time to approve the sample. Any delay that might occur in approving the samples for reasons of its not meeting the specifications or other discrepancies inadequacy in furnishing samples of best qualities from various manufacturers and such other aspects causing delay on the approval of the materials / equipment etc. shall be to the account of the contractor.

iii) Cost of tests:

The cost of making any test shall be borne by the contractor if such test is intended by or provided for in the specification or BOQ.

iv) Costs of tests not provided for:

If any test is ordered by the Architect/ Consultant which is either

- a) If so intended by or provided for or (in the cases above mentioned) is not so particularized, or though so intended or provided for but ordered by the Architect / Consultant to be carried out by an independent person at any place other than the site or the place of manufacture or fabrication of the materials tested or any Government / approved laboratory, then the cost of such test shall be borne by the contractor.

16.0 Obtaining information related to execution of work:

No claim by the contractor for additional payment shall be entertained which is consequent upon failure on his part to obtain correct information as to any matter affecting the execution of the work nor any misunderstanding or the obtaining incorrect information or the failure to obtain correct information relieve him from any risks or from



the entire responsibility for the fulfillment of contract.

17.0 Contractor's superintendence:

The contractor shall give necessary personal superintendence during the execution the works and as long, thereafter, as the Architect/Consultant may consider necessary until the expiry of the defects liability period, stated hereto.

18.0 Quantities:

The bill of quantities (BOQ) unless or otherwise stated shall be deemed to have been prepared in accordance with the Indian Standard Method of Measurements and quantities. The rate quoted shall remain valid for variation of quantity against individual item to any extent. The entire amount paid under Clause 19, 20 hereof as well as amounts of prime cost and provision sums, if any, shall be excluded.

19.0 Works to be measured:

The Architect/Consultant may from time to time intimate to the contractor that he requires the work to be measured and the contractor shall forthwith attend or send a quantity representative to assist the Architect in taking such measurements and calculation and to furnish all particulars or to give all assistance required by any of them. Such measurements shall be taken in accordance with the Mode of measurements detail in the specifications. The representative of the Architect / Consultant shall take measurements with the contractor's representative and the measurements shall be entered in the measurement book. The contractor or his authorized representative shall sign all the pages of the measurement book in which the measurements have been recorded in token of his acceptance. All the corrections shall be duly attested by both representatives. No over writings shall be made in the M book should the contractor not attend or neglect or omit to depute his representative to take measurements the measurements recorded by the representative of the Architect/consultant shall be final. All authorized extra work, omissions and all variations made shall be included such measurement.

20.0 Variations:

No alteration, omission or variation ordered in writing by the Architect/consultant vitiates the contract. In case the SBIIMS/ Architect / Consultant thinks proper at any during the progress of works to make any alteration in, or additions to or omission from the works or any. Alteration in the kind or quality of the materials to be used therein, the Architect / Consultant shall give notice thereof in writing to the contractor shall confirm in writing within seven days of giving such oral instructions the contract shall alter to, add to, or omit from as the case may be in accordance with such but the contractor shall not do any work extra to or make any alterations or additions to or omissions from the works or any deviation from any of the provisions of the contract, stipulations, specifications or contract drawings without previous consent in writing of the Architect/ Consultant and the value of such extras, alterations, additions or omissions shall in all cases be determined by the Architect / Consultant and the same shall be added to or deducted



from the contract value, as the case maybe.

21.0 Valuation of Variations:

No claim for an extra shall be allowed unless it shall have been executed under the authority of the Architect / Consultant with the concurrence of the SBIIMS as herein mentioned. Any such extra is herein referred to as authorized extra and shall be made in accordance with the following provisions.

- (i) The net rates or prices in the contract shall determine the valuation of the extra work where such extra work is of similar character and executed under similar conditions as the work price herein.
- (ii) Rates for all items, wherever possible should be derived out of the rates given in the priced BOQ.

The net prices of the original tender shall determine the value of the items omitted, provided if omissions do not vary the conditions under which any remaining items of Works are carried out, otherwise the prices for the same shall be valued under sub-Clause 'c' hereunder.

Where the extra works are not of similar character and/or executed under similar conditions as aforesaid or where the omissions vary the conditions under which any remaining items or works are carried out, then the contractor shall within 7 days of the receipt of the letter of acceptance inform the Architect/ consultant of the rate which he intends to charge for such items of work, duly supported by analysis of the rate or rates claimed and the Architect/consultant shall fix such rate or prices as in the circumstances in his opinion are reasonable and proper, based on the market rate.

Where extra work cannot be properly measured or valued the contractor shall be allowed day work prices at the net rates stated in the tender, of the BOQ or, if not, so stated then in accordance with the local day work rates and wages for the district; provided that in either case, vouchers specifying the daily time (and if required by the Architect/Consultant) the workman's name and materials employed be delivered for verifications to the Architect /consultant at or before the end of the week following that in which the work has been executed.

It is further clarified that for all such authorized extra items where rates cannot be derived from the tender, the Contractor shall submit rates duly supported by rate analysis worked on the 'market rate basis for material, labour hire / running charges of equipment and wastages etc. plus 15% towards establishment charges, contractor's overheads and profit. Such items shall, not be eligible for escalation.

22.0 Final measurement:

The measurement and valuation in respect of the contract shall be completed within two months of the virtual completion of the work.



23.0 Virtual Completion Certificate (VCC):

On successful completion of entire works covered by the contract to the full satisfaction of the SBIIMS, the contractor shall ensure that the following works have been completed the satisfaction of the SBIIMS:

Clear the site of all scaffolding, wiring, pipes, surplus materials, contractor's labour equipment and machinery.

Demolish, dismantle and remove the contractor's site office, temporary works, structure including labor sheds/camps and constructions and other items and things whatsoever brought upon or erected at the site or any land allotted to the contractor by the SBIIMS not incorporated in the permanent works.

Remove all rubbish, debris etc. from the site and the land allotted to the contractor by the SBIIMS and shall clear, level and dress, compact the site as required by the SBIIMS

Shall put the SBIIMS in undisputed custody and possession of the site and all land allot by the SBIIMS

Shall hand over the work in a peaceful manner to the SBIIMS

All defects / imperfections have been attended and rectified as pointed out by the Architects to the full satisfaction of SBIIMS

Upon the satisfactory fulfillment by the contractor as stated above, the contractor is entitled to apply to the Architect / consultant is satisfied of the completion of work. Relative to which the completion certificate has been sought, the Architect/ consultant shall within fourteen (14) days of the receipt of the application for completion certificate, issue a VCC in respect of the work for which the VCC has applied.

This issuance of a VCC shall not be without prejudice to the SBIIMS's rights and contractor liabilities under the contract including the contractor's liability for defects liability nor shall the issuance of VCC in respect of the works or work at any site be construction as a waiver of any right or claim of the SBIIMS against the contractor in respect of or work at the site and in respect of which the VCC has been issued.

24.0 Work by other agencies:

The SBIIMS / Architect / consultant reserves the rights to use premises and any portion the site for execution of any work not included in the scope of this contract which it may desire to have carried out by other persons simultaneously and the contractor shall not only allow but also extend reasonable facilities for the execution of such work. The contractor however shall not be required to provide any plant or material for the execution of such work except by special arrangement with the SBI. Such work shall be carried out in such manner as not to impede the progress of the works included in the contract.



25.0 Insurance of works:

Without limiting his obligations and responsibilities under the contract the contractor shall insure in the joint names of the SBIIMS And the contractor against all loss of damages from whatever cause arising other than the excepted risks, for which he is responsible under the terms of contract and in such a manner that the SBIIMS and contractor are covered for the period stipulated I clause of GCC and are also covered during the period of maintenance for loss or damage arising from a cause, occurring prior to the commencement of the period of maintenance and for any loss or damage occasioned by the contractor in the course of any operations carried out by him for the purpose of complying with his obligations under clause.

The Works for the time being executed to the estimated current Contract value thereof, or such additional sum as may be specified together with the materials for incorporation in the works at their replacement value.

The constructional plant and other things brought on to the site by the contractor to the replacement value of such constructional plant and other things.

Such insurance shall be effected with an insurer and in terms approved by the SBIIMS which approval shall not be unreasonably withheld and the contractor shall whenever required produce to the Architect / consultant the policy if insurance and the receipts for payment of the current premiums.

26.0 Damage to persons and property:

The contractor shall, except if and so far as the contract provides otherwise indemnify the SBI against all losses and claims in respect of injuries or damages to any person or material or physical damage to any property whatsoever which may arise out of or in consequence of the execution and maintenance of the works and against all claims proceedings, damages, costs, charges and expenses whatsoever in respect of or in relation thereto except any compensation of damages for or with respect to:

- a) The permanent use or occupation of land by or any part thereof.
- b) The right of SBIIMS to execute the works or any part thereof on, over, under, in or through any lands.
- c) Injuries or damages to persons or properties which are unavoidable result of the execution or maintenance of the works in accordance with the contract.
- d) Injuries or damage to persons or property resulting from any act or neglect of the SBIIMS their agents, employees or other contractors not being employed by the contractor or for or in respect of any claims, proceedings, damages, costs, charges and expenses in respect thereof or in relation thereto or where the injury or damage was contributed to by the contractor, his servants or agents such part of the compensation as may be just and equitable having regard to the extent of the responsibility of the SBIIMS, their employees, or agents or other employees, or agents or other contractors



for the damage or injury.

27.0 Contractor to indemnify SBIIMS:

The contractor shall indemnify the SBIIMS against all claims, proceedings, damages, costs, charges and expenses in respect of the matters referred to in the provision sub-clause 26.0 of this clause.

28.0 Contractor's superintendence:

The contractor shall fully indemnify and keep indemnified the SBIIMS against any action, claim, or proceeding relating to infringement or use of any patent or design or any alleged patent or design rights and shall pay any royalties which may be payable in respect to any article or part thereof included in the contract. In the event of any claim made under or action brought against SBIIMS in respect of such matters as aforesaid the contractor shall be immediately notified thereof and the contractor shall be at liberty, at his own expenses to settle any dispute or to conduct any litigation that may arise there from, provided that the contractor shall not be liable to indemnify the SBIIMS if the infringement of the patent or design or any alleged patent or design right is the direct result of an order passed by the Architect / consultant in this behalf.

29.0 Third Party Insurance:

Before commencing the execution of the work the contractor but without limiting his obligations and responsibilities under clause 25.0 of GCC shall insure against his liability for any material or physical damage, loss, or injury which may occur to any property including that of SBIIMS, or to any person, including any employee of the SBIIMS, by or arising out of the execution of the works or in the carrying out of the contract, otherwise than due to the matters referred to in the provision to clause 25.0 thereof.

30.0 Minimum amount of Third Party Insurance:

Such insurance shall be affected with an insurer and in terms approved by the SBIIMS which approval shall not be reasonably withheld and for at least the amount stated below. The contractor shall, whenever required, produce to the Architect / consultant the policy or policies of insurance cover and receipts for payment of the current premiums.

The minimum insurance cover for physical property, injury, and death is Rs.5 Lakh per occurrence with the number of occurrences limited to four. After each occurrence contractor will pay additional premium necessary to make insurance valid for four occurrences always.

31.0 Accident or Injury to workman:

The SBIIMS Shall not be liable for or in respect to any damages or compensation payable at law in respect or in consequence of any accident or injury to any workmen or other person in the employment of the contractor or any sub-contractor, save and except an accident or injury resulting from any act or default of the SBIIMS or their



agents, or employees. The contractor shall indemnify and keep indemnified SBIIMS against all such damages and compensation, save and except as aforesaid, and against all claims, proceedings, costs, charges and expenses whatsoever in respect thereof or in relation thereto.

32.0 Insurance against accidents etc. to workmen:

The contractor shall insure against such liability with an insurer approved by the SBIIMS During the whole of the time that any persons are employed by him on the works and shall, when required, produce to the architect / consultant such policy of insurance and receipt for payment of the current premium. Provided always that, in respect of any persons employed by any sub-contractor the contractor's obligation to insured as aforesaid under this sub-clause shall be satisfied if the sub-contractor shall have insured against the liability in respect of such persons in such manner that SBIIMS is indemnified under the policy but the contractor shall require such sub-contractor to produce to the Architect /consultant when such policy of insurance and the receipt for the payment of the current premium.

33.0 Remedy on contractor's failure to insure:

If the contractor fails to effect and keep in force the insurance referred to above or any other insurance which he may be required to effect under the terms of contract, then and in any such case the SBIIMS may effect and keep in force any such insurance and pay such premium or premiums as may be necessary for that purpose and from time to time deduct the amount so paid by the SBIIMS as aforesaid from any amount due or which may become due to the contractor, or recover the same as debt from the contractor.

Without prejudice to the others rights of the SBIIMS against contractors. In respect of such default, the employer shall be entitled to deduct from any sums payable to the contractor the amount of any damages costs, charges, and other expenses paid by the SBIIMS And which are payable by the contractors under this clause. The contractor shall upon settlement by the Insurer of any claim made against the insurer pursuant to a policy taken under this clause, proceed with due diligence to rebuild or repair the works destroyed or damaged. In this event all the monies received from the Insurer in respect of such damage shall be paid to the contractor and the Contractor shall not be entitled to any further payment in respect of the expenditure incurred for rebuilding or repairing of the materials or goods destroyed or damaged.

34.0 Commencement of Works:

The date of commencement of the work will be reckoned from the date of award of letter by the SBIIMS

35.0 Time for completion:

Time is essence of the contract and shall be strictly observed by the contractor. The entire work shall be completed within a period of **45 days** from the date of commencement. If required in the contract or as directed by the Architect / consultant.



The contractor shall complete certain portions of work before completion of the entire work. However, the completion date shall be reckoned as the date by which the whole work is completed as per the terms of the contract.

36.0 Extension of time:

If, in the opinion of the Architect/consultant, the work be delayed for reasons beyond the control of the contractor, the Architect/consultant may submit a recommendation to the SBIIMS to grant a fair and reasonable extension of time for completion of work as per the terms of contract. If the contractor needs an extension of time for the completion of work or if the completion of work is likely to be delayed for any reasons beyond the due date of completion as stipulated in the contract, the contractor shall apply to the SBIIMS Through the Architect' Consultant in writing at least 30 Days before the expiry of the scheduled time and while applying for extension of time he shall furnish the reason in detail and his justification if an', for the delays. The architect/consultant shall submit their recommendations to the SBIIMS in the prescribed format for granting extension of time. While granting extension of time the contractor shall be informed the period extended time which will qualify for levy of liquidated damages. For the balance period in excess of original stipulated period and duly sanctioned extension of time by the provision of liquidated damages as stated under clause 10.0 shall become applicable. Further the contract shall remain in force even for the period beyond the due date of completion irrespective whether the extension is granted or not.

37.0 Rate of progress:

Whole of the materials, plant and labour to be provided by the contractor and the mode, manner and speed of execution and maintenance of the works are to be of a kind and conducted in a manner to the satisfaction of the Architect/consultant should the rate of progress of the work or any part thereof be at any time be in the opinion the. Architect / consultant too Slow to ensure the completion of the whole of the work the prescribed time or extended time for completion the Architect/consultant shall the re upon take such steps as considered necessary by the Architect / consultant to expedite progress so as to complete the works by the prescribed time or extended time. Such communications from the Architect / consultant neither shall relieve. The contractor from fulfilling obligations under the contract nor he will be entitled to raise any claims arising out of such directions.

38.0 Work during nights and holidays:

Subject to any provision to the contrary contained in the contract no permanent work shall save as herein provided be carried on during the night or on holidays without the permission in writing of the Architect/consultant, save when the work is unavoidable or absolutely necessary for the saving of life or property or for the safety of the work in which case the contractor shall immediately advise the Architect / consultant. However the provisions of the clause shall not be applicable in the case of any work which becomes essential to carry by rotary or double shifts in order to achieve the progress and quality of the part of the works being technically required / continued with the prior



approval of the Architect / consultant at no extra cost to the SBIIMS.

All work at night after obtaining approval from competent authorities shall be carried out without unreasonable noise and disturbance.

39.0 No compensation or restrictions of work:

If at any time after acceptance of the tender SBIIMS shall decide to abandon or reduce the scope of work for any reason whatsoever and hence not required the whole or any part of the work to be carried out. The Architect / consultant shall give notice in writing that effect to the contractor and the contractor shall act accordingly in the matter. The contractor shall have no claim to any payment of compensation or otherwise what so ever on account of any profit or advantage which he might have derived from the execution of the Work fully but which he did not derive in consequence of the fore closure of the whole or part of the work.

Provided that the contractor shall be paid the charges on the cartage only of materials actually and bonafide brought to the site of the work by the contractor and rendered surplus as a result of the abandonment, curtailment of the work or any portion thereof and then taken back by the contractor, provided however that the Architect/Consultant shall have in such cases the option of taking over all or any such materials at their purchase price or a local current rate whichever is less.

In case of such stores having been issued from SBIIMS stores and returned by the contractor to stores, credit shall be given to him at the rates not exceeding those at which were originally issued to the contractor after taking into consideration and deduction for claims on account of any deterioration or damage while in the custody of the contractor and in this respect the decision of Architect / consultant shall be final.

40.0 Suspension of work:

The contractor shall, on receipt of the order in writing of the Architect / consultant (whose decision shall be final and binding on the contractor) suspend the progress of works or any part the offer such time and in such manner as Architect/consultant may consider necessary so as not to cause any damage or injury to the work already done or endanger the safety thereof for any of following reasons:

- a) On account any default on the part of the contractor, or
- b) For proper execution of the works or part thereof for reasons other than the default the contractor, or
- c) For safety of the works or part thereof.

The contractor shall, during such suspension, properly protect and secure the works the extent necessary and carry out the instructions given in that behalf by the Architect / consultant.

i) If the suspension is ordered for reasons (b) and (c) in sub-para (i) above:

The contractor shall be entitled to an extension of time equal to the period of every such



suspension. No compensation whatsoever shall be paid on this account.

41.0 Action when the whole security deposit is forfeited:

In any case in which under any clause or clauses of this contract, the Contractor shall have rendered himself liable to pay compensation amounting to the whole of his security deposit the Architect / consultant shall have the power to adopt any of the following course as they may deem best suited to the interest of the SBIIMS:

To rescind the contract (of which rescission notice in writing to the contractor by - Architect / consultant shall be conclusive evidence) and in which case the security, deposit of the contractor shall be forfeited and be absolutely at the disposal of SBIIMS.

To employ labour paid by the SBIIMS and to supply materials to carry out the work, or part of the work, debiting the contractor with the cost of the labour and materials cost of such labour and materials as worked out by the Architect / consultant shall final and conclusive against the contractor) and crediting him with the value of the work done, in all respects in the same manner and at the same manner and at the same rates as if it had been carried out by the contractor under the terms of this contract certificate of architect /consultant as to the value of work done shall be final conclusive against the contractor.

To measure up the work of the contractor, and to take such part thereof as shall unexecuted, out of his hands, and to give it to another contractor to complete in which case any expenses which may be incurred in excess of the sum which would have been paid to the original contractor, if the whole work had been executed by him (The amount of which excess the certificates in writing of the Architects / consultant shall final and conclusive) shall be borne by original contractor and may be deducted any money due to him by SBIIMS under the contract or otherwise, or from his security deposit or the proceeds of sale thereof, or sufficient part thereof.

In the event of any of above courses being adopted by the SBIIMS the contractor shall have no claim to compensation for any loss sustained by him by reasons of his having purchased or procured any material or entered into any engagements or make any advances on account of, or with a view to the execution of the work or the performance of the contract and incase the contract shall be rescind under the provision aforesaid, the contractor shall not be entitled to recover or to be paid any sum or any work thereto for actually performed under this contract, unless, and until the Architect / consultant will have certified in writing the performance of such work and the value payable in respect thereof, and he shall only been titled to be paid the value so certified.

42.0 Owner's right to terminate the contract:

If the contractor being an individual or a firm commit any 'Act of insolvency' or shall be adjusted an insolvent or being an incorporated company shall have an order for compulsory winding up voluntarily or subject to the supervision of Govt. and of the



Official Assignee of the liquidator in such acts of insolvency or winding up shall be unable within seven days after notice to him to do so, to show to the reasonable satisfaction of the Architect / Consultant that he is able to carry out and fulfill the contract, and to dye security therefore if so required by the Architect /Consultant.

Or if the contractor (whether an individual firm or incorporated Company) shall suffer execution to be issued or shall suffer any payment under this contract to be attached by or on behalf of any of the creditors of the contractor.

Or shall assign or sublet this contract without the consent in writing of the SBIIMS through the Architect/Consultant or shall charge or encumber this contract or any payment due to which may become due to the contractor there under:

has abandoned the contract; or

has failed to commence the works, or has without any lawful excuse under these conditions suspended the progress of the works for 14 days after receiving from the SBIIMS through the Architect / consultant written notice to proceed, or

has failed to proceed with the works with such diligence and failed to make such due progress as would enable the works to be completed within the time agreed upon, or has failed to remove the materials from the site or to pull down and replace work within seven days after written notice from the SBIIMS through the Architect / Consultant that the said materials were condemned and rejected by the Architect/ consultant under these conditions; or has neglected or failed persistently to observe and perform all or any of the acts matters or things by this contract to be observed and performed by the contractor for seven days after written notice shall have been given to the contractor to observe or perform the same or has to the detriment of good workmanship or in defiance of the SBIIMS or Architect's / consultant's instructions to the contrary subject any part of the contract. Then and in any of said cases the SBIIMS and or the Architect / consultant, may not withstanding any previous waiver, after giving seven days' notice in writing to the contractor, determine the contract, but without thereby affecting the powers of the SBIIMS or the Architect/consultant or the obligation and liabilities of the contractor the whole of which shall continue in force as fully as if the contract had not been determined and as if the works subsequently had been executed by or on behalf of the contractor. And, further the SBIIMS through the Architect / consultant their agents or employees may enter upon and take possession of the work and all plants, took scaffoldings, materials, sheds, machineries lying upon the premises or on the adjoining lands or roads use the same by means of their own employees or workmen in carrying on and completing the work or by engaging any other contractors or persons to the work and the contractor shall not in any way interrupt or do any act, matter or thing to prevent or hinder such other contractor or other persons employed for complement and finishing or using the materials and plant for the works.



When the works shall be completed or as soon thereafter as convenient the SBIIMS Or architect/consultant shall give a notice in writing to the contractor to remove his surplus materials and plants and should the contractor fail to do so within 14 days after receive thereof by him the SBIIMS sell the same by publication, and after due publication, and shall, adjust the amount realized by such auction. The contractor shall have no right to question any of the act of the SBIIMS incidental to the sale of the materials etc.

43.0 Certificate of payment:

The contractor shall be entitled under the certificates to be issued by the Architect / consultant to the contractor within 10 working days from the date of certificate to payment from SBIIMS From time to time SBIIMS shall recover the statutory recovering other dues including the retention amount from the certificate of payment. Provided always that the issue of any certificate by the Architect / consultant during progress of works or completion shall not have effect as certificate of satisfaction relieve the contractor from his liability under clause.

The Architect / consultant shall have power to withhold the certificate if the work or in part thereof is not carried out to their satisfaction. The Architect/consultant may by any certificate make any corrections required previous certificate.

The SBIIMS shall modify the certificate of payment as issued by the architect/consultant from time to time while making the payment

The contractor shall submit interim bills only after taking actual measurements and properly recorded in the Measurement books.

The final bill may be submitted by contractor within a period of one month from the date of virtual completion and Architect / consultant shall issue the certificate of payment within a period of two months. The SBIIMS Shall pay the amount within a period of three months from the date of issue of certificate provided there is no dispute in respect of rates and quantities.

The contractor shall submit the interim bills in the prescribed format with all details.

44.0

A. Settlement of Disputes and Arbitration:

Except where otherwise provided in the contract all questions and disputes to the meaning of the specifications, design, drawings and instructions herein before mentioned and as to the quality of workmanship or materials used on the work or as to any other question , claim, right, matter or thing whatsoever in any way arising out of or relating to the contract, designs, drawings specifications, estimates, instructions orders or these conditions or otherwise concerning the work or the execution or failure to execute the same whether arising during the progress of the work or after the cancellation, termination, completion or abandonment thereof shall be dealt with as mentioned hereinafter:

If the contractor considers that he is entitled to any extra payment or compensation in



respect of the works over and above the amounts admitted as payable by the Architect or in case the contractor wants to dispute the validity of any deductions or recoveries made or proposed to be made from the contractor raise any dispute, the contractor shall forthwith give notice in writing of his claim, or dispute to The Senior Vice President, SBIIMS, Head Office, Mumbai and endorse a copy of the same to the Architect, within 30 days from the date of disallowance thereof or the date of deduction or recovery. The said notice shall give full particulars of the claim, grounds on which it is based and detailed calculations of the amount claimed and the contractor shall not be entitled to raise any claim nor shall the SBIIMS Pvt. Ltd be in any way liable in respect of any claim by the contractor unless notice of such claim shall have been given by the contractor to the Senior Vice President, SBIIMS, Head Office, Mumbai in the manner and within the time as aforesaid. The Contractor shall be deemed to have waived and extinguished all his rights in respect of any claim not notified to the Senior Vice President, Head Office, Mumbai in writing in the manner and within the time aforesaid.

B. Settlement of Disputes and Arbitration:

The Senior Vice President, Head Office, Mumbai shall give his decision in writing on the claims notified by the receipt of the contractor may within 30 days of the receipt of the decision of the Sr. V.P., Head Office / Submit his claims to the conciliating authority namely the M.D. & C.E.O., SBIIMSPL, Head Office, Mumbai for conciliation along with all details and copies of correspondence exchanged between him and the SBIIMS

If the conciliation proceedings are terminated without settlement of the disputes, the contractor shall, within a period of 30 days of termination thereof shall give a notice to the concerned M.D. & C.E.O. of the SBIIMS for appointment of an arbitrator to adjudicate the notified claims falling which the claims of the contractor shall be deemed to have been considered absolutely barred and waived.

Except where the decision has become final, binding and conclusive in terms of the contract, all disputes or differences arising out of the notified claims of the contractor as aforesaid and all claims of the SBIIMS Pvt. Ltd shall be referred for adjudication through arbitration by the Sole Arbitrator appointed by the M.D. & C.E.O. and who will be of Deputy General Manager rank. It will also be no objection to any such appointment that the Arbitrator so appointed is a SBIIMS, Officer and that he had to deal with the matters to which the Contract relates in the course of his duties as SBIIMS, Officer. If the arbitrator so appointed is unable or unwilling to act or resigns his appointment or vacates his office due to any reason whatsoever another sole arbitrator shall be appointed in the manner aforesaid by the said M.D. & C.E.O. of the SBIIMS Such person shall be entitled to proceed with the reference from the stage at which it was let by his predecessor.

It is a term of this contract that the party invoking arbitration shall give a list of disputes with amounts claimed in respect of each dispute along with the notice for appointment of arbitrator.



It is also a term of this contract that no person other than a person appointed by such Chief General Manager as aforesaid should act as arbitrator. The conciliation and arbitration shall be conducted in accordance with the provisions of the Arbitration & Conciliation Act 1996 or any or any accordance modification or reenactment thereof and the rules made there under.

It is also a term of the contract that if any fees are payable to the Arbitrator these shall be paid equally by both the parties. However, no fees will be payable to the arbitrator if he is a SBIIMS Officer.

It is also a term of the contract that the Arbitrator shall be deemed to have entered on the reference on the date he issues notice to both the parties calling them to submit their statement of claims and counter statement of claims. The venue of the arbitration shall be such place as may be fixed by the arbitrator in his sole discretion. The fees, if any of the arbitrators shall, if required to be paid before the award is made and published, be paid half and half by each of the parties. The Cost of the reference and of the award (including the fees, if any of the arbitrator) shall be in the discretion of the arbitrator who may direct to any by whom and in what manner, such costs or any part thereof, shall be paid and fix or settle the amount of costs to be so paid.

45.0 Water supply:

The contractor shall make his own arrangements for water required for the work and nothing extra will be paid for the same. This will be subject to the following condition.

- i) That the water used by the contractor shall be fit for construction purposes to the satisfaction of the Architect /consultant's.
- ii) The contractor shall make alternative arrangements for the supply of water if the arrangement made by the contractor for procurement of water in the opinion of the Architect / consultant is unsatisfactory.
- iii) In case contractor is permitted to use SBIIMS's source of water i.e. Municipal connection, Bore well (existing or new) etc., the SBIIMS Pvt. Ltd will recover @ 0.25% of contract amount from the final bill of contractor.

The contractor shall construct temporary well / tube well in SBIIMS Pvt. Ltd land for taking water for construction purposes only after obtaining permission in writing from the SBIIMS The contractor has to make his own arrangements for drawing and distributing the water at his own cost. He has to make necessary arrangements. To avoid any accidents or damages caused due to construction and subsequent maintenance of the wells. He has to obtain necessary approvals from local authorities, if required, at his own cost. He shall restore the ground to its original condition after wells are dismantled on completion of work or hand over the well to the SBIIMS without any compensation as



directed by the architect /consultant.

46.0 Power supply:

The contractor shall make his own arrangements for power and supply / distribution system for driving plant or machinery for the work and for lighting purpose at his own cost, the cost of running and maintenance of the plants are to be included in his tender prices, He shall pay all fees and charges required, by the power supply and include the same in his tendered rates and hold the owner free from all such costs. He has to obtain necessary approval from the appropriate authorities, if required.

In case contractor is permitted to use Bank's source of power supply provided at one point, the SBIIMS will recover @ 0.25% of contract amount from the bill of contractor.

47.0 Treasure trove etc.

Any treasure trove, coin or object antique which may be found on the site shall be the property of SBIIMS and shall be handed over to the bank immediately.

48.0 Method of measurement:

Unless otherwise mentioned in the schedule of quantities or in mode of measurement, the measurement will be on the net quantities or work produced in accordance with up to date rules laid down by the Bureau of Indian Standards. In the event any dispute/ disagreement the decision of the Architect / consultant shall be final and binding on the corrector.

49.0 Maintenance of registers:

The contractor shall maintain the following registers as per the enclosed perform at site of work and should produce the same for inspection of SBIIMS /Architect / consultant whenever desired by them. The contractor shall also maintain the records / registers as required by the local authorities / Govt. from time to time.

- i) Register for secured advance
- ii) Register for hindrance to work
- iii) Register for running account bill
- iv) Register for labour

50.0 Force Majeure:

Neither contractor nor SBIIMS shall be considered in default in performance of the obligations if such performance is prevented or delayed by events such as but not war, hostilities revolution, riots, AIR CONDITIONING commotion, strikes, lockout, conflagrations, epidemics, accidents, fire, storms, floods, droughts, earthquakes or ordinances or any act of or for any other cause beyond the reasonable control of the party affected or prevents or delayed. However, a notice is required to be given within 30 days from the happening of the event with complete details, to the other party to the contract, if it is not possible to serve a notice, within the shortest possible period without delay.



As soon as the cause of force majeure has been removed the party whose ability perform its obligations has been affected, shall notify the other of such cessation and the actual delay incurred in such affected activity adducing necessary evidence in support thereof.

From the date of occurrence of a case off or force majeure obligations of the party affected.

51.0 Water power and other facilities:

The rate quoted by the contractor shall include all expenses that are required for providing all the water required for the work and the contractor shall make his own arrangements for the supply of good quality water suitable for the construction and good quality drinking water for their workers If necessary the contractor has to sink a tube well

/ open well and bring water by means of tankers at his own cost for the purpose The SBIIMS will not be liable to pay any charges in connection with the above

The rate quoted in the tender shall include the expenses for obtaining and maintaining power connections and shall pay for the consumption charges

The contractors for other trades directly appointed by the SBIIMS shall be entitled to take power and water connections from the temporary water and power supply obtained by the contractor However, the concerned contractor shall make their own arrangements to draw the supply and pay directly the actual consumption charges at mutually agreed rates between them. All municipal charges for drainage and water connection for Construction purposes shall be borne by the contractor and charges payable for permanent connections, if any, shall be initially paid by the contractor and the SBIIMS will reimburse the amount on production of receipts.

The SBIIMS as well as the Architect / consultant shall give all possible assistance to the Contractor's to obtain the requisite Permission from the various authorities, but the responsibility for obtaining the same in time shall be of the contractor.

In case contractor is permitted to use Bank's source of water and power supply provided at one point, the SBIIMS will recover @ 0.5% of contract amount for water and electricity separately from the bill of contractor.

51.0 Facilities for contractor's employees:

The contractor shall make his own arrangement for the housing and welfare of his staff and workmen including adequate drinking water facilities. The contractor shall also make the arrangements at his own cost for transport where necessary for his staff and workmen to and from site of work at his own cost.

52.0 Lighting of works:



The contractor shall at all times provide adequate and approved lighting as required for the proper execution and supervision and inspection of work.

53.0 Firefighting arrangements:

The contractor shall provide suitable arrangement for firefighting at his own cost. This purpose he shall provide requisite number of fire extinguishers and adequate number of buckets, some of which are to be always kept filled with sand and some with water these equipment shall be provided at suitable prominent and easily accessible place and shall be properly maintained.

Any deficiency in the fire safety or unsafe conditions shall be corrected by the contractor at his own cost and, to the approval of the relevant authorities. The contractor make the following arrangements at his own cost but not limited the following:

- a) Proper handling, storage and disposal of combustible materials and waste.
- b) Work operations which can create fire hazards.
- c) Access for fire-fighting equipment.
- d) Type, number and location of containers for the removal of surplus materials and rubbish.
- e) Type, size, number and location of fire extinguishers or other fire fighting equipment.
- f) General housekeeping.

54.0 Site order book:

A site order book shall be maintained at site for the purpose of quick communication between the Architect / Consultant. Any communication relating to the work may be conveyed through records in the site order book. Such a communication from one party to the other shall be deemed to have been adequately served in terms of contract Each site order book shall have machine numbered pages in triplicate and shall carefully maintained and preserved by the contractor and shall be made available to the architect /consultant as and when demanded- Any instruction which the architect/consultant may like to issue to the contractor or the contractor may like to bring to the architect / consultant two copies of such instructions shall be taken from the site order book and one copy will be handed over to the party against proper acknowledgment and the second copy will be retained for their record.

55.0 Temporary fencing/barricading:

The contractor shall provide and maintain a suitable temporary fencing/barricading and gates at his cost to adequately enclose all boundaries of the site for the protection of the public and for the proper execution and security of the work and in accordance with the requirement of the architect/consultant and regulations of local authorities. These shall be altered, relocated and adopted from time to time as necessary and removed on completion of the work.



56.0 Site meetings:

Site meetings will be held to review the progress and quality evaluation. The contractor shall depute a senior representative along with the site representative and other staff of approved sub-contractors and suppliers as required to the site meetings and ensure all follow up actions. Any additional review meetings shall be held if required by the architect/ consultant.-

57.0 Disposal of refuse:

The contractor shall cart away all debris, refuse etc. arising from the work from the site and deposit the same as directed by the architect / consultant at his own cost. It is the responsibility of the contractor to obtain from the local authorities concerned to the effect that all rubbish arising out of contractor's activities at the construction site or any other off-site activities borrow pits has been properly disposed off.

58.0 Contractor to verify site measurement:

The contractor shall check and verify all site measurements whenever requested other specialists contractors or other sub-contractors to enable them to prepare the own shop drawing and pass on the information with sufficient promptness as will in any way delay the works.

59.0 Displaying the name of the work:

The contractor shall put up a name board of suitable size as directed by the architect/ consultant indicating there in the name of the project and other details as given by the architect/consultant at his own cost and remove the same on completion of work.

60.0 As built drawings:

For the drawings issued to the contractor by the Architect / Consultant. The architect Consultant will issue two sets of drawings to the Contractor for the items for some changes have been made. From the approved drawings as instructed by the SBIIMS / Architect / Consultant. The contractor will make the changes made on these copies and return these copies to the architect / Consultant for their approval. In cases revision is required or the corrections are not properly marked the architect/Consultant will point out the discrepancies to the contractor. The contractor will have to incorporate these corrections and / or attend to discrepancies either on copies as directed by the architect / consultant and resubmit to him for approval. The architect / consultant will return one copy duly approved by him.

For the drawings prepared by the contractor:

The contractor will modify the drawing prepared by him wherever the changes made by the SBIIMS / architect / consultant. And submit two copies of such modified drawings to the architect/ consultant for approval. The architect / consultant will return one copy of the approved drawing to the contractor.



61.0 Approved make:

The contractor shall provide all materials from the list of approved makes at his own cost and also appoint the specialized agency for the waterproofing, anti-termite treatment, aluminum doors and windows and any other item as specified in the tender. The architect/consultant may approve any make / agency within the approved list as given in the tender after inspection of the sample/mockup.

62.0 Procurement of materials:

The contractor shall make his own arrangements to procure all the required materials for the work. All wastages and losses in weight shall be to the contractors account

63.0 Excise duty, taxes, levies etc.:

The contractor shall pay and be responsible for payment of all taxes, duties, levies, royalties, fees, cess or charges in respect of the works including but not limited to sales tax, tax on works contract excise duty, and Octroi, payable in respect of materials, equipment plant and other things required for the contract. All of the aforesaid taxes, duties, levies, fees and charges shall be to the contractor's account and the SBIIMS Shall not be required to pay any additional or extra amount on this account. Variation of taxes, duties, fees, levies etc. if any, till completion of work shall be deemed to be included in the quoted rates and no extra amount on this account. Variation of taxes, duties, fees, levies etc. if any, till completion of work shall be deemed to be included in the quoted rates and no extra claim on this account will in any case be entertained. If a new tax or duty or levy or cess or royalty or Octroi is imposed under as statutory law during the currency of contract the same shall be borne by the contractor. However, GST will be paid extra.

64.0 Acceptance of tender:

The SBIIMS shall have the right to reject any or all tenders without assigning any reason. They are not to bind to accept the lowest or any tender and the tenderer or tenderers shall have no right to question the acts of the SBIIMS. However adequate transparency would be maintained by the SBIIMS

65.0 Photographs:

The Contractor shall at his own expense supply to the Architects with duplicate hard copies of large photographs not less than 25 cm. x 20 cm. (10" x 8") of the works, taken from two approved portions of each building, at intervals of not more than one months during the progress of the work or at every important stage of construction.

In addition to above, the contractor shall be bound to submit adequate no. of site photographs along with each Running Bill for the project clearing showing major progress of work measured and claimed therein failing which the Architect/ SBIIMS may consider returning the Bill to the contractor and no claim for delay on this account will be entertained.



66.0 Safety Codes:

1. First aid appliances including adequate supply of sterilized dressing and cotton wool shall be kept in a readily accessible place.
2. An injured person shall be taken to a public hospital without loss of time, in cases when the injury necessitates hospitalization.
3. Suitable and strong scaffolds should be provided for workmen for all works that cannot safely be done from the ground.
4. No portable single ladder shall be over 8 meters in length. The width between the side rails shall not be less than 30 cm. (clear) and the distance between two adjacent rungs shall not be more than 30 cm. When a ladder is used an extra labour shall be engaged for holding ladder.
5. The excavated material shall not be placed within 1.5 meters of the edge of the trench half of the depth of trench whichever is more. All trenches and excavations shall be provided with necessary fencing and lighting.
6. Every opening in the floor of a building or in a working platform be provided with suitable means to prevent the fall of persons or materials by providing suitable fencing or railing whose minimum height shall be one meter.
7. No floor, roof or other part of the structure shall be so overloaded with debris or material as to render it unsafe.
8. Workers employed on mixing and handling material such as asphalt, cement, mortar, concrete and lime shall be provided with protective footwear and rubber hand gloves.
- 9 Those engaged in welding works shall be provided with welders' protective eye shield and gloves.
10. (i) No paint containing lead or lead products shall be used except in the form of paste readymade paint.
(ii) Suitable face masks should be supplied for use by the workers when the paint applied in the form of spray or surface having lead paint dry rubbed and scrapped.
11. Overalls shall be supplied by the contractor to the painters and adequate facilities shall be provided to enable the working painters to wash during cessation of work.
- 12 Hoisting machines and tackle used in the works including their attachments anchor and supports shall be in perfect condition.



13. The ropes used in hoisting or lowering material or as a means of suspension shall be durable quality and adequate strength and free from defects.



APPENDIX HEREIN BEFORE REFERRED TO

1) Name of the organization Offering Contract: The Circle Head & Vice President. SBIIMS, Circle Office, SBI, LHO, Bhadra, Laldarwaja, Ahmedabad-1

2) Consultants : **A R . Devdatt M Pandya**
M/s Studio919 Architects

3) Site Address: State Bank of India, Changodar Branch Dist: Ahmedabad.

4) Scope of Work : Proposed Air Conditioning works of Changodar Branch, RBO-4, Ahmedabad

5) Name of the Contractor : _____

6) Address of the Contractor : _____

7) Period of Completion : 45 days from the date of
• Issue of work order.

8) Earnest Money Deposit : **Rs. 4,100/- (Rupees Four Thousand one hundred only) by means of Demand Draft/Pay Order** (Valid for a period of 180 Days from the last date of submission of the tender) from any scheduled Nationalized Bank drawn **in favour SBI Infra Management Solutions Pvt. Ltd. and payable at Ahmedabad)**

9) Retention Money : As per clause no. 1.4 of general Conditions

10) Defects Liability Period : Twelve Months from the date of Virtual completion.

11) Insurance to be undertaken by the Contractor : 125% of Contract Value
Contractor at his cost (Contractor's all risk policy)

12) Liquidated damages : 0.5% of the Contract amount shown in the tender per week subject to max. 5% of the contract value or actual final bill value.

13) Value of Interim Bill (Min.) : Rs. NIL



- 14) Date of Commencement : From the date of work order issued to the Contractor/ or the day on which the Contractor is instructed to take possession of the site whichever is earlier.
- 15) Period of Final Measurement : 2 Months from the date of Virtual Completion.
- 16) Initial Security Deposit : 2% of the Accepted Value of the Tender.
- 17) Total Security Deposit : 5% of the final bill amount including ISD.
- 18) Refund of initial Security Deposit
Comprising of EMD and ISD. : 50% of the Security Deposit shall be refunded to the Contractor on completion of the work and balance refunded only after the Defect Liability Period is over.
- 19) Period for Honoring Certificate : One Month for R.A.Bills
- 20) The final bill will be submitted by the Contractor within one month of the date fixed for completion work and the Bill shall be certified within 3 months from the date of receipt of final bill provided the bills are submitted with all pre-requisite documents/test reports etc. prescribed in the tender.

Signature of Tenderer.

Date:



LETTER OF DECLARATION

To,
The C.H. &V.P., Circle Office,
SBI Infra Management Solutions Pvt. Ltd., Third Floor, SBI, LHO,
Bhadra, Laldarwaja,
Ahmedabad-1

Dear Sir,

PROPOSED AIR CONDITIONING WORKS OF CHANGODAR BRANCH. DIST: AHMEDABAD.

Having examined the terms & conditions, drawings, specifications, design relating to the works specified in the memorandum hereinafter set out and having visited and examined the site of the works specified in the said memorandum and having acquired the requisite information relating thereto and affecting the quotation, I/We hereby offer to execute the works specified in the said memorandum within the time specified in the said memorandum on the item rate basis mentioned in the attached schedule and in accordance in all respect with the specifications, design, drawings and instructions in writing referred to in conditions of Tender, the articles of agreement, conditions of contract and with such conditions so far as they may be applicable.

MEMORANDUM

(a)	Description of work	Proposed Air Conditioning works for Changodar Branch Dist: Ahmedabad.
(b)	Earnest Money	Rs. 4,100.00 - (Rupees Four Thousand one hundred only) by means of Demand Draft / Pay Order from any scheduled Nationalized Bank drawn in favor of SBI Infra Management Solutions Pvt. Ltd. and payable at Ahmedabad)
(c)	Time allowed for completion of work from the date of issue of work order.	45 days from the date of commencement as per tender.

Should this tender be accepted, I/we hereby agree to abide by and fulfill the terms and



provisions of the said conditions of Contract annexed hereto so far as they may be applicable or in default thereof to forfeit and pay to SBIIMS, the amount mentioned in the said conditions.

I/we have deposited Demand Draft / Banker's Cheque / FDR for a sum of **Rs 4,100 /- (Rupees Four Thousand one Hundred only)** as Earnest money deposit with the SBI Infra Management Solutions Pvt. Ltd. Should I/we do fail to execute the contract when called upon to do so, I/we hereby agree that this sum shall be forfeited by me/us to SBI Infra Management Solutions Pvt. Ltd.

We understand that as per terms of this tender, the SBIIMS may consider accepting our tender in part or whole or may entrust the work of various buildings proposed (i.e. Institute Building, Staff Qtrs. And Director's Bungalow/Interior work) in phases. We, therefore, undertake that we shall not raise any claim/compensation in the eventuality of Bank deciding to drop any of the building/buildings from the scope of work of this tender at any stage during the contract period. Further, we also undertake to execute the work entrusted to us in phases on our approved rates and within the stipulated time limit without any extra claim for price escalation as provided for in Clause 9.0.1 "Instructions to Tenderers" of this tender.

We, hereby, also undertake that, we will not raise any claim for any escalation in the prices of any of the material during the currency of contract/execution/completion period.

Yours faithfully,

Signature of contractor With Seal



PROFORMA FOR RUNNING A/C BILL
TABLE - XIII

- i. Name of Contractor/ Agency :
- ii. Name of Work :
- iii. Sr. No. of this Bill:
- iv. No. & Date of previous Bill :
- v. Reference to Agreement No. :
- vi. Date of Written order to commence :
- vii. Date of Completion as per Agreement :

S. No	Item Description	Unit	Rate (Rs.)	As per Tender		Up to Previous R.A. Bill		Up to Date (Gross)		Present Bill		Remarks
				Qty	Amount (Rs.)	Qty	Amount (Rs.)	Qty	Amount (Rs.)	Qty	Amount (Rs.)	
1	2	3	4	5	6	7	8	9	10	11	12	13

Note:

1.	If part rate is allowed for any items, it should be indicated with reasons for allowing such a rate.	<hr/> <hr/> Net Value since previous bill
2.	If ad-hoc payment is made, it should be mentioned specifically.	



The measurements on the basis of which the above entries for the Running Bill No.----
 ----- were made have been taken jointly on ----- and are
 recorded at pages ----- to ----- of measurement book
 No.-----.

-----	-----	-----
Signature and date of Contractor	Signature and date of Architects Representative (Seal)	Signature and date of Site Engineer

The work recorded in the above-mentioned measurements has been done at the site satisfactorily as per tender drawings, conditions and specifications.

-----	-----
Architect	Signature and date of Site Engineer



TABLE - XV

MEMORANDUM FOR PAYMENT

R/A BILL NO.

1.	Total value of work done since previous bill (A)	Rs.....
2.	Total amount of secured advance due since Previous Bill (B)	Rs.....
3.	Total amount due since Previous Bill (C) (A+B)	Rs.....
4.	PVA on account of declaration in price of Steel, Cement and other materials and labour as detailed in separate statements enclosed.	Rs.....
5.	Total amount due to the Contractor	Rs.....
	<u>OBJECTIONS:</u>	
i)	Secured Advance paid in the previous R/A	Rs.....
ii)	Retention money on value of works as per accepted tenders up to date amount Rs.	Rs.....
	Less already recovered	Rs.....
	Balance to be recovered	Rs.....
iii)	Mobilization Advance, if any	Rs.....
(a)	Outstanding amount (principal + interest) as on date	Rs.....
(b)	To be recovered in this bill	Rs.....
iii.	Any other Departmental materials cost to be recovered as per contract, if any	Rs.....
iv.	Any other Departmental service charges to be recovered if any, as per contract (water, power etc.) enclose statement.	Rs.....



The bill amount to Rs. ----- (both figures and words) has been scrutinized by us after due checking of the measurements of work as required and is recommended for payment.

Date:-----

Signature of Architect
with Seal

The bill amount to Rs.-----certified by Consultants has been scrutinized by me after due test checking of measurements of works as required and is recommended for payment for an amount of Rs.....

Date : -----

Signature of Banks/ SBIIMS Engineer

STATUTORY DEDUCTION:		
i)	Total Amount due (E)	Rs. -----
ii)	Less I.T. Payable	Rs. -----
iii)	Less S.T. Payable	Rs. -----
	Net Payable	Rs. -----

This figures given in the Memorandum for payable has been verified and bill passed for payment ----- (in words and figures)

Date:-----

Signature of the Circle Head & VP



TECHNICAL SPECIFICATION FOR THE AIR CONDITIONING CONTRACT WORK

SR. NO	Description of work
01	<p>Supply of split A/C 1.0 tr. (5 star) :- Wall mounted air conditioner shall have 1.0Tr i.e nominal 12.000 BTU/capacity per hour at the ambient of 40 degree centigrade capacity. Unit shall have maximum 45/46 dB noise level at the distance of 1 MT for outdoor/indoor units. The unit shall be suitable for 230 volts power supply. With temperature indicator and remote for operation. (5- Start AC high wall type split A/C). The air filter shall be easy to maintain and preferable showing the status of choking. Every unit shall be supported by warrantee of one year however sealed unit warrantee must be given for 5 years from the manufacturer. CONDESOR MUST BE OF COPPER METAL.</p>
02	<p>SUPPLY OF SPLIT a/c 1.5 Tr. (5 star):- Wall mounted air conditioner shall have 1.5 Tr i.e. nominal 18,000 BTU/capacity per hour at the ambient of 40 degree centigrade capacity. Unit shall have maximum 45/46 dB noise level at the distant of 1 MT for indoor/outdoor units. The units shall be suitable for 230 volts of power supply. With temperature indicator and remote for the operations. (5- star A/C high wall type split A/C) The air filter shall be easy to maintain and preferably showing the status of choking. Every unit shall be supported by warrantee of one year however sealed unit warrantee must be given for 5 years from the manufacturer. CONDESOR MUST BE OF COPPER METAL.</p>
03	<p>Installation of split 1 & 1.5 Tr :- Total work comprising of unpacking till commissioning of each units indoor as well as outdoor. Connecting the pipes & electrical cables/wires. With necessary support & fabricating for hanging the unit from ceiling. Installation shall be done with the control panel. The installation of A/C. charging towards installation testing and commissioning of split and cassette A/C. this includes nitrogen flushing, pressure testing, attending leakages, loading, unloading, gas charging and panel fittings.</p>
04	<p>Extra copper pipe :</p> <p>a) The contractor shall have to provide extra length of copper pipe with proper lagging to make the perfect job of insulation. All the copper pipe shall be without joints and proper flare-up shall be done with tools and tackles for excellent workmanship. No dent shall be allowed while bending the pipe of laying it on connecting it to machine/evaporate/condenser. High grade of foam insulation shall be provided. Entire piping shall be done over the false ceiling and do not compromise any aesthetic look. THIS IS THE LENGTH OTHER THAN SUPPLIED for 1.0 & 1.5 TR. A/C with manufacturer kit.</p> <p>a) Then contractor shall have to provide copper pipe with proper lagging to make the perfect job of insulation. All the copper pipe shall be without joints and</p>



	proper flare- up shall be done with tools and tackles for excellent workmanship. No dent shall be allowed while bending the pipe of laying it or connecting it to machine/evaporator /condense. High grade of foam insulation shall be provided. Entire piping shall be done over the false ceiling and do not compromise any aesthetic look. Size of copper shall sleeve insulated with saddling and clamping.
05	<p>Wiring :- SPLIT UNIT TO OUTDOOR UNIT The A/C contractor has to get the wiring from the MCB unit provided by the electrical contractor in house. All the wiring shall be of approved make only. The wiring shall pass through ISI approved conduits as mentioned in approved list of materials. Any drilling of the wall for getting copper pipe or wiring shall be sealed and finished by the A.C contractor. Size of the wires shall be 3x 2.5 sq. m. m. for A.C contractor for each & every A.C unit.</p>
06	<p>Drain water piping :- Condensed water in the interior of the banking hall shall be drained outside/toilet block through gravity-slop. The entire piping shall be 25 M.M. ISI approved pipes to carry condensed water. All the piping shall be maintainable and testing shall be done before connecting.</p>
07	supply and installation of fabricated steel supports for outdoor units for (1T.1.5 Tr)
08	<p>Civil work : The A/C contractor has to complete the zari work in the wall and coordinate with the civil contractor while doing flooring to run the drainage pipe etc. finishing has to be done by the A/C contractor with required labour & materials.</p>

VARIABLE REFRIGERANT FLOW SYSTEM

9.1. Scope:

The scope of this section comprises the supply, erection, testing and commissioning of Variable Refrigerant Volume System conforming to these specifications and in accordance with the requirements of Drawings and Schedule of quantities.

9.2. Type:

Unit shall be air cooled, variable refrigerant volume air conditioner consisting of one outdoor unit and multiple indoor units. Each indoor unit having capability to cool independently for the requirement of the rooms. All indoor units shall be provided with isolation valves so that a particular unit can be isolated and removed for servicing, while system keeps functioning in normal way.

It shall be possible to connect multiple indoor units on one refrigerant circuit as shown in the drawings or as indicated in schedule of quantities. The indoor units on any circuit can be of different type and also controlled individually. Following type of indoor units shall be connected to the system:

- Ceiling mounted cassette type.



- Wall Mounted Split type
- Compressor installed in outdoor unit shall be equipped with capacity control mechanism and capable of changing the rotating speed / mass flow rate of refrigerant by scroll engaging / disengaging mechanism to follow variations in cooling. Outdoor unit shall be suitable for mix-match connection of all type of indoor units.

The refrigerant piping between indoor units and outdoor units shall be extended upto 100m with maximum 50 m level difference without any oil traps. Oil recovery system shall be managed without disturbance to normal operation cycle of the system / compressor.

Both indoor unit and outdoor unit shall be factory assembled, tested and filled with first charge of refrigerant before delivery at site.

9.3. Out Door Unit:

The outdoor unit shall be factory assembled, weather proof casing constructed from heavy gauge mild steel panels with powder coated finish.

All outdoor units above 5 HP rating shall have minimum two number scroll compressors.

In case of outdoor units with multiple compressors, the operation shall not be disrupted with failure of any compressor.

The noise level shall not be more than 60 dB (A) at normal operation measured horizontally 1m away and 1.5 m above ground level.

The outdoor unit shall be modular in design with possible future expansions.

The unit shall be provided with microprocessor control panel.

9.4. Compressor:

The compressor shall be high efficiency scroll type and capable for capacity controlling. It shall change the speed / refrigerant mass flow rate in accordance to the variation in cooling load requirement. Refrigerant mass flow rate can be changed by speed modulation of compressor / mechanical control system. System shall incorporate liquid sub-cooling mechanism with liquid injection at intermediate pressure.

The inverter used, shall be IGBT (insulated gate bipolar transistor) type for efficient and quiet operation.

All outdoor units shall have multiple steps of capacity control to meet load fluctuation and indoor unit individual control. All parts of compressor shall be sufficiently lubricated. Forced lubrication may also be employed.



Oil heater shall be provided in the compressor casing.

9.5. Heat Exchanger:

The Heat Exchanger shall be constructed with copper tubes mechanically bonded to aluminum fins to form a cross fan coil and larger surface area.

The fins shall have anticorrosion treatment for Heat Exchanger Coil. The treatment shall be suitable for areas of high pollution, moisture and salt laden air.

The casings, fans, motors etc. shall also be with anticorrosion treatment as a standard features.

The unit shall be provided with necessary number of direct driven low noise level propeller type fans arranged for vertical / horizontal discharge. Each fan shall have a safety guard.

9.6. Refrigerant Circuit:

The Refrigerant Circuit shall include an liquid receiver /accumulator, liquid & gas shut off valves and a solenoid valve. All necessary safety devices shall be provided to ensure the safety operation of the system..

9.7. Safety Devices:

All necessary safety devices shall be provided to ensure safe operation of the system.

Following safety devices shall be part of the outdoor unit: high pressure switch, low pressure switch, fuse, crankcase heater, fusible plug, over current protection for inverter, and short recycling guard timer.

9.8. Piping:

All connections of Refrigerant piping shall be in high grade Copper of Refrigeration quality with Eddy Current Testing and material test Certificates.

All connections, tees, reducers etc. shall be standard make fittings.

Insulation of cold lines shall be carried out with Armaflex / K-Flex insulation sheets and tubes of appropriate thickness so that condensation does not occur.

For individual Piping 50 / 100 mm wide Aluminum Tape shall be used at joints of Piping with Bands for identification.

For outdoor piping, the finish shall be woven GRP Mat finished with colored Epoxy paints to withstand outside ambient conditions and UV Radiation.

9.9. Oil Recovery System:

Unit shall be equipped with an oil recovery system to ensure stable operation with long refrigerant piping.

System shall be designed for proper oil return to compressor along with the



distribution of oil to individual compressor.

The refrigerant piping shall be extended upped 100 M with 50-M level difference without oil traps.

9.10. Indoor Units:

Units shall be factory assembled, wired, piped and tested.

Units shall have DX coils with copper tubes and bonded aluminum fins for highly efficient heat transfer.

Units shall have Centrifugal fans for adequate amount of Air circulation and low Noise.

Units shall have inlet filters, which are easily cleanable and replaceable.

All components of Units are easily accessible for connection, repairs and maintenance.

Units shall have very low noise.

All units with Factory manufactured Units, Grills shall have auto swing feature for proper Air distribution.

All unit shall be controlled by electronic Expansion Valves only.

All units mounted inside the ceiling shall have fans capable of sustaining duct connections, and special filters if necessary.

Visible indoor units shall have wireless remotes. Price of the same shall be included in cost of unit by default.

Concealed indoor units shall have sensor mounted on supply air grilles / diffusers which can be controlled with wireless remotes unless specified.

Anticorrosion treatment for avoiding corrosion of coils.

All units shall have adequate insulation or Lining to avoid condensation.

Cooling coil and refrigeration parameters shall be designed in such a way that supply air temperature shall not be less than 14⁰C or 1⁰C above room dew point temp, whichever is more. Contractor shall guarantee inside conditions with selected supply air temperature.

9.11. Ceiling Mounted Cassette Type Unit (Multi-Flow Type):

The unit shall be ceiling mounted type. The unit shall include pre-filter, fan section and DX-coil section. The housing of the unit shall be powder coated galvanized steel. The body shall be light in weight and shall be possible to suspend from four corners.

Unit shall have a external attractive panel for supply and return air. Unit shall have four way supply air grilles on sides and return air grille in centre.

Each unit shall have high lift drain pump, fresh air intake provision (if specified), low gas level detection system and very low operating sound.

9.12 Ceiling Mounted Ductable Type Unit:

Unit shall be suitable for ceiling mounted type. The unit shall include pre filter, fan section & DX-coil section. The housing of unit shall be light weight powder coated



galvanized steel. The unit shall have high static fan for ductable arrangement.

9.13 High Wall Mounted Units:

The units shall be high wall mounted type. The unit shall include pre-filter, fan section & DX-coil section. The housing of unit shall be light weight powder coated galvanized steel.

Unit shall have an attractive external casing for supply and return air.

9.14. Ceiling Mounted Concealed type units:

Unit shall be suitable for ceiling mounted type. The unit shall include pre filter, fan section & DX-coil section. The housing of unit shall be light weight powder coated galvanized steel. It shall be slim and quite in operation

9.15. Central Remote Controller (Option if Specified in BOQ):

A multi-functional microprocessor based centralized controller (central remote controller) shall be supplied as an optional accessory.

The controller shall be able to control upto min. 64 zones of 64 group (each group consisting of max. 16 units) or 128 nos. of indoor units with the following functions.

- Temperature setting for each zone, or group, or indoor unit.
- On/Off as a zone or individual unit.
- Indication of operating condition.
- Select ON of all operation modes for each zone..
- The controller shall have wide screen liquid crystal display and shall be wired by a non polar 2 wire transmission cable to a distance of 1000m away from the indoor unit.
- The controller shall be integrated to BAS system thru software for monitoring & controlling of all above parameters including start/ stop of each indoor / outdoor unit. All necessary interface cards / units should be supplied as a part of the system to integrate to the BAS Software.

9.16. Unified On/Off Controller (Option if Specified in BOQ):

Unified ON / OFF controller shall be supplied as an optional accessory.

The controller shall be able to control minimum 2 groups (each group containing maximum 16 indoor units) or 128 nos. of indoor units with the following functions.

- On / Off as a zone or individual unit.
- Indication of operation condition of each group.
- Select one of 4 operation modes.

The controller shall be wired by a non-polar 2 wire transmission cable to distance of 1 km away from indoor unit.



The controller shall be integrated to BAS system thru software for monitoring & controlling of all above parameters including start/ stop of each indoor / outdoor unit. All necessary interface cards / units should be supplied as a part of the system to integrate to the BAS Software.

9.17. Condensate:

25mm dia uPVC pipes, 40mm dia uPVC headers & fittings shall be used for condensate, from Evaporator Unit to drain point. The joints shall be properly sealed so that there is no water leakage. U-trap shall be provided. Additional insulation drain tray shall be provided below the Evaporator Unit, if required.

Mounting

All indoor units shall be mounted with Brackets, Hangers etc. with proper size anchor Fasteners.

9.18 Electrical installation:

For Variable Refrigerant flow systems, power will be provided near outdoor unit location. HVAC Contractor to provide suitable distribution panel along with 3-phase power to outdoor units and single phase power to all indoor units fed by these outdoor units. Power / control cabling along with supports shall be included.

AIR DISTRIBUTION

10.1 SCOPE (AS PER “SMACNA” STANDARDS)

The scope of this section comprises supply fabrication, installation and testing of all sheet metal / aluminum ducts, supply, installation, testing and balancing of all grilles, registers and diffusers. All to be in accordance with these specifications and the general arrangement shown on the Drawings.

10.2 DUCT MATERIALS

10.2.1 RAW MATERIALS

Galvanizing shall be Class VII – light coating of zinc, nominal 180gm/sq.m surface area and Lock Forming Quality prime material along with mill test certificates. In addition, if deemed necessary, samples of raw material, selected at random by owner’s site representative shall be subject to approval and tested for thickness and zinc coating at contractor's expense.

10.2.2. GAUGES, BRACING BY SIZE OF DUCTS



All ducts shall be factory fabricated from galvanized steel / aluminum of the following thickness, as indicated as below:

10.2.2.1 For Ducts with external SP up to 250 Pa (ESP up to 25mmWg)

Rectangular Ducts G. S.	Pressure 250 Pa		
	Duct Section Length 1.2 m (4 ft)		
Maximum Duct Size	Gauge	Joint Type	Bracing Spacing
1–500 mm	26	C&S Connector	Nil
501 – 750 mm	26	C&S Connector	Nil
751 – 900 mm	24	TDF Flange	Nil
901 – 1200 mm	24	TDF Flange	Nil
1201 – 1500 mm	22	TDF Flange	Nil
1501 – 1800 mm	20	TDF Flange	JTR or ZEE BAR
1801 – 2100 mm	20	TDF Flange	JTR or ZEE BAR
2101 – above	18	TDF Flange	JTR or ZEE BAR

*Distance of reinforcement/bracing from each joint. Bracing material to be same as of material used for joining of duct sections.

10.3 DUCT CONSTRUCTION

10.4 All ducts shall be fabricated and installed in workmanlike manner, conforming to relevant SMACNA codes.

- a) Ducts so identified on the Drawings shall be acoustically lined and insulated from outside as described in the section “Insulation” and as indicated in schedule of Quantities. Duct dimensions shown on drawings, are overall sheet metal dimensions inclusive of the acoustic lining where required and indicated in Schedule of quantities. The fabricated duct dimensions should be as per approved drawings and care should be taken to ensure that all connecting sections are dimensionally matched to avoid any gaps.



10.5 DAMPERS

- a. Dampers: All duct dampers shall be opposed blade louver dampers of robust 16 G GSS construction and tight fitting. The design, method of handling and control shall be suitable for the location and service required.

10.6 SUPPLY AND RETURN AIR DIFFUSERS / GRILLS

Supply and return air diffusers shall be as shown on the Drawings and indicated in Schedule of Quantities. Aluminium diffusers shall be powder coated & made from extruded aluminium section as specified in schedule of quantities.

- a) Rectangular Diffusers shall be extruded aluminium construction, square & rectangular diffusers with flush fixed pattern for different spaces as per schedule of quantities. These shall be selected in consultation with the consultant / client. These shall be procured only after obtaining written approval from **CLIENT** for each type of diffuser.
- b) Supply air diffusers shall be equipped with fixed air distribution grids, removable key-operated volume control dampers, and anti-smudge rings as required in specific applications, and as per requirements of schedule of quantities.

DOCUMENTATION & MEASUREMENTS FOR DUCTING

All ducts fabricated and installed should be accompanied and supported by proper documentation viz:

- a) Bill of material/Packing list for every duct section supplied.

Measurement sheet covering each fabricated duct piece showing dimensions and external surface area along with summary of external surface area of duct gauge-wise.

Each and every duct piece to have a tag number, which should correspond to the serial number, assigned to it in the measurement sheet. The above system will ensure speedy and proper site measurement and verification.

Unless otherwise specified, measurements for ducting for the project shall be on the basis of centerline measurements described herewith

Ductwork shall be measured on the basis of external surface area of ducts. Duct measurements shall be taken before application of the insulation. The external surface area shall be calculated by measuring the perimeter comprising overall width and depth, including the corner joints, in the center of each duct section, multiplying with the overall length from flange face to flange face of each duct



section and adding up areas of all duct sections. Plenums shall also be measured in a similar manner.

For tapered rectangular ducts, the average width and depth shall be considered for perimeter, whereas for tapered circular ducts, the diameter of the section midway between large and small diameter shall be adopted, the length of tapered duct section shall be the centerline distance between the flanges of the duct section.

For special pieces like bends, tees, reducers, branches and collars, mode of measurement shall be identical to that described above using the length along the centerline.

The quoted unit rate for external surface of ducts shall include all wastage allowances, flanges and gaskets for joints, nuts and bolts, hangers and angles with double nuts for supports, rubber strip 5mm thick between duct and support, vibration isolator suspension where specified or required, inspection chamber/access panel, splitter damper with quadrant and lever for position indication, turning vanes, straightening vanes, and all other accessories required to complete the duct installation as per the specifications. These accessories shall NOT be separately measured nor paid for.

- b) Special Items for Air Distribution shall be measured by the cross-section area perpendicular to air flow, as identified herewith:
 - I. Grilles and registers - width multiplied by height, excluding flanges. Volume control dampers shall form part of the unit rate for registers and shall not be separately accounted.
 - II. Diffusers - cross section area for air flow at discharge area, excluding flanges. Volume control dampers shall form part of unit rate for supply air diffusers and shall not be separately accounted.
 - III. Linear diffusers - shall be measured by cross-sectional areas and shall exclude flanges for mounting of linear diffusers. The supply air plenum for linear diffusers shall be measured with ducting as described earlier.
 - IV. Flexible connection - shall be measured by their cross sectional area perpendicular to the direction of air flow. Quoted rates shall include the necessary mounting arrangement, flanges, nuts and bolts and treated-for-fire requisite length of canvas cloth.

10.7 FLEXIBLE DUCT:

Insulated flexible duct should be UL 181 CLASS I AIR DUCT LISTED AND LABELLED WITH NFPA 90A & 90B AND SEAL OF AIR DIFFUSION COUNCIL with double lamination of tough polyester which encapsulates steel helix wire forms the air tight



inner core, double layer core wrapped in a multiple thickness of fiberglass wool with R Value 4.2, Green guard certification of fiberglass wool must. , Reinforced and sheathed in a rugged and durable tri directionally reinforced metalized polyester jacket.

Flexible duct connections should be made as per UL181 listing procedure with proper flexible right forming brace connection allowing right connections for flexible duct into energy efficient. and Strapping the flexible duct connections with flexible duct strap ties.