

**STATE BANK OF INDIA**

PREMISES & ESTATE DEPARTMENT  
LOCAL HEAD OFFICE, KOLKATA  
SAMRIDHI BHAVAN, BLOCK B, 9<sup>TH</sup> FLOOR,  
1, STRAND ROAD, KOLKATA – 700 001, WEST BENGAL

**SBI INVITES e-TENDERS FOR**

**AIR-CONDITIONING WORKS OF PROPOSED TBU AT 1<sup>ST</sup> FLOOR OF SBI ALIPORE BRANCH**

**Manufacturers/OEM/Authorized dealers of Daikin, Blue Star, Hitachi, Carrier, Mitsubishi, LG, Voltas, Toshiba, O'General brands only eligible to apply**

**(To submit the valid dealership certificate as a proof of Dealership)**

**LETTER OF AUTHORIZATION FROM MANUFACTURER TO PARTICIPATE IN THIS TENDER MUST BE ENCLOSED. BIDDERS ARE REQUESTED TO SUBMIT ALL RELEVANT DOCUMENTS MENTIONED IN THE TECHNICAL BID. NO FURTHER QUERIES WILL BE ENTERTAINED FOR SUBMISSION OF DOCUMENTS. INSUFFICIENT DOCUMENTS ALONGWITH THE TENDER WILL LEAD TO DISQUALIFICATION OF THE BIDDER**

Last Date & Time for submission of e-Tender: 22/06/2023 UPTO 2:00 PM

Date & Time of Opening of e-Tender: 3.00 PM on 15/06/2023

Tender Submitted By:

Name of Contractor :

Address :

GSTIN:

Note:

Date:

1. The bidders should possess valid Digital Signature Certificate (DSC) to participate in the e-Tendering.

**Bidders are requested to submit technical bid as well as price bid in online mode only. No hard copy is required to be submitted physically during tender submission EXCEPT BANK'S DRAFT FOR Earnest Money Deposit (EMD). Only L1 bidder will be asked to submit the signed hard copy of all the pages of NIT in due course before issuing work order.**

Signature of Bidder with seal

PREMISES & ESTATE DEPARTMENT  
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1, STRAND ROAD, KOLKATA – 700 001, WEST BENGAL

SBI invites application cum sealed E-tender (ON ITEM RATE BASIS ) in single bid (Technical cum commercial bid) from **Manufacturers/OEM/authorized dealers of Daikin, Blue Star, Hitachi, Carrier, Mitsubishi, LG, Voltas, Toshiba, O'General Split/Cassette type Air conditioners for Air conditioning works of proposed TBU at 1<sup>st</sup> floor of SBI Alipore Branch**

through online e-Tendering System Portal <https://www.tenderwizard.com/SBIETENDER>. Details of the e-Tender are as under.

Sl.	Description-1	Description-2
1	Name & Location of work	<b>AIRCONDITIONING WORKS OF PROPOSED TBU AT 1<sup>ST</sup> FLOOR OF SBI ALIPORE BRANCH</b>
2	Tenders shall remain valid for	90 days from the date of opening of tenders.
3	<b>Time allowed for completion</b>	<b>21 days</b> (including Sundays and Holidays) from the Date of Issue of the Work Order or the Site Handover Date, whichever is later.
4	Last date and time of submission of tender	<b>2.00 PM on or before 22/06/2023</b>
5	Date & Time of opening of Tender	<b>3.00 PM on 22/06/2023</b>  In case the tender opening date is declared as holiday / lock-down, the tender will be opened in the next working day at the same time.
6	Address for submission of Tender Document where tender will be opened	Office of,  <b>The Assistant General Manager, (P&amp;E), State Bank of India, Local Head Office, Block-B, 9<sup>th</sup>Floor, Samriddhi Bhawan, Kolkata-700001</b>
7	Earnest Money Deposit (EMD) (Valid MSME in this relevant category are exempted from EMD)	<b>Rs. 4,800.00 (Rupees Four Thousand Eight Hundred only).</b> <b>by means of Demand Draft</b> (Hard copy to be deposited at the office of SBI, P&E Dept, LHO Kolkata in favor of <b>State Bank of India.</b> payable at Kolkata in a sealed envelope on or before up to 12:00PM on 15/06/2023. <b>(Scanned copy of the Demand draft is to be uploaded in the e-tender portal)</b> <b>Bidders are requested to submit technical bid as well as price bid in online mode only except EMD. No hard copy is required to be submitted physically during tender submission.</b>
8	Defective liability period	<b>12 months from the date of virtual completion of work</b>
9	Liquated Damages	<b>0.5% per week subject to a maximum of 5% of contract value</b>
10	Approximate Estimated cost of the project.	<b>Rs.4,83,700.00 + GST As Applicable</b>
11	Initial Security Deposit (ISD)	(2% of contract amount – EMD amount) to be submitted by successful tenderer.
12	Total Security Deposit (TSD) in the form of Retention Money	5% of the final bill amount including ISD. ISD will be retained with us for a defect liability period i.e, 12

	(RM)	months from the date of final bill. No interest will be paid for the said ISD.
13	Availability of Tender Documents	Tender documents are to be downloaded from the Bank's website ( <a href="http://www.sbi.co.in">www.sbi.co.in</a> ) or SBI e-Tender Portal <a href="http://www.tenderwizard.in/SBIETENDER">www.tenderwizard.in/SBIETENDER</a>
14	For e-Tender related queries	<p><b><u>Service provider :</u></b></p> <p>M/s. Antares Systems Limited, Registered Office: #24, Sudha Complex, 3RD Stage, 3RD Block, Bangalore – 560079, Karnataka. Ph.: 080-49352000 / 40482000 Fax: 080-49352034 <b>Help Desk: 9073677150 / 9073677151 / 9073677152 / 033 4604 6611</b></p> <p><b>Contact Persons:</b> (On working days 9 AM to 6 PM)</p> <p><b>1. Mr.Kushal Bose</b> Mobile No.: +91 7686913157 e-Mail: <a href="mailto:kushal.b@antaressystems.com">kushal.b@antaressystems.com</a></p> <p><b>2. Mr. Subrata Sheet</b> Mobile No.: +91 9674758723 e-Mail: <a href="mailto:subrata.s@antaressystems.com">subrata.s@antaressystems.com</a></p>
15	Value of Interim Certificate	No advance on materials / plant / machinery or mobilization advance shall be paid under any circumstances.
16	Deduction of Income Tax and GST	<p>A) TDS on Income Tax/GST will be deducted at source as per Govt. Guidelines.</p> <p>B) The contractor should comply with the following;</p> <p>i. Contractor should have GST Registration Number</p> <p>ii. Invoice should specifically/separately disclose the amount of GST levied at applicable rate as per GST provision</p> <p>iii. Contractor should timely file his GST return in accordance with GST provisions to enable the Bank to claim the credit of GST paid to the contractor.</p>
17	For any details, please contact	<p><b>The Assistant General Manager (P&amp;E)</b> State Bank of India Premises &amp; Estate Department, Local Head Office, Kolkata, "Samridhi Bhavan", Block B, 9<sup>th</sup> Floor, 1, Strand Road, Kolkata – 700 001. <b>Contact No.:</b> 033 – 2243 6677 <b>e-Mail ID:</b> <a href="mailto:agmpre.lhokol@sbi.co.in">agmpre.lhokol@sbi.co.in</a></p>

18	Documents Required to be signed , scanned and uploaded in the e-Tendering website during submission of Tender	<ol style="list-style-type: none"> <li>1. <b>Signed Copy of EMD</b></li> <li>2. Process Compliance statement as per Annexure-I of NIT</li> <li>3. <b>Signed &amp; Stamped copy of page no. 01 to 11 of Technical bid i.e NIT.</b></li> <li>4. Declaration copy related reading, understanding and acceptance of all the pages of NIT</li> <li>5. Firm should have the valid dealership/Authorisation certificate issued by OEM (Copy should be enclosed)</li> </ol> <p><b>Note- original EMD TO BE SUBMITTED AT THIS OFFICE IN SEALED COVER . Name of work and name of vendor to be mentioned in the cover.</b></p> <p>No Hard copy of technical bid as well as price bid have to be submitted physically. <b>Technical Bid</b> as well as <b>Price bid is to be submitted in online mode only.</b></p>
19	Corrigendum	Corrigenda, if any, is to be followed as published in <a href="http://www.tenderwizard.in/SBIETENDER">www.tenderwizard.in/SBIETENDER</a> portal only.
20	Any additional Information	The estimated rates as per the Break-up Of Quantities (BOQ) uploaded in this tender are inclusive of materials, labour, wages, fixtures, transportation, installation, all taxes & charges, cost of the insurances as specified in the tender, cost towards testing of materials supplied, wastages, Octroi, machinery, temporary works such as scaffolding, cleaning, overheads, profit, statutory expenses, incidental charges and all related expenses to complete the work. <b>However, GST on work value will be paid extra as applicable.</b>

**We strongly recommend** the contractor to study the site condition & work scope of work of above Branch/Office before submitting the tender. The work shall be strictly executed as per the Bank's approved policy. Materials to be used for execution of the said work are to be approved by the bank prior to use. **State Bank of India, Kolkata LHO has the right to accept / reject any / all tenders without assigning any reason.**

Sd/-  
**Assistant General Manager (P&E.)**  
 SBI, P&E Deptt., LHO Kolkata

**CAUTION NOTE :** Please note that the contractor quoting abnormally low / erratic rates will be asked to submit rate analysis or Additional performance guarantee (APG) or both in the form of Bank Guarantee or D.D issued by any scheduled Bank as per draft supplied by the Bank, within a period of one week before award the work. The amount of said Bank Guarantee shall be equal to the **difference** between **92.5 % of estimated cost of project** and **tender amount quoted by the contractor**. This Bank Guarantee/D.D will be treated as an additional security deposit for due fulfillment of contract and will be retained by the SBI for entire completion period of the project. The contractor shall undertake not to cancel/withdraw the said Bank Guarantee/DD. In case contractor fails to undertake the job within stipulated time or leave the same incomplete or carryout substandard job, the bank will be at liberty to forfeit the said initial security deposit and additional security deposit by invoking the Bank Guarantee/en-cashing the DD.

**And**

**if the rate analysis submitted by the vendor found to be non-satisfactory & rates are non-reasonable** then the **vendor shall be debarred from participating in any further E-tendering process (for next 6 months) to be conducted by establishments under SBI LHO Kolkata.**

<b>IMPORTANT NOTES</b>	
(a)	All contractors who are empanelled with SBI Kolkata Circle in the specific category are only eligible for the above-mentioned work.
(b)	Any abnormal increase from the quoted price / cost will not be accepted.
(c)	The Bank reserves the right to reject any or all the tenders without assigning any reason whatsoever.
(d)	<p>Sealed Tenders are invited from the OEM/authorized dealer of <b>Daikin, Blue Star, Hitachi, Carrier, Mitsubishi, LG, Voltas, Toshiba, O'General</b> for <b>Airconditioning works</b> ) only in one part, i.e., <b>Part – I [Technical Bid + Singed Copy of Special term deposit]</b>, <b>Part – II [Price Bid]</b>, to be submitted online through the following portal: <a href="http://www.tenderwizard.in/SBIETENDER">www.tenderwizard.in/SBIETENDER</a></p> <p style="text-align: center;"><b>** Price Bid and technical bid shall not be accepted offline.</b></p> <p style="text-align: center;"><b>Price Bid and technical bid can be submitted through online mode only *</b></p> <p><b>Part – I (Technical Bid + “Singed Copy of Special term deposit”):</b> Technical Bid will be available online for downloading of documents in the portal as stated above and is to be submitted offline the address as mentioned above.</p> <p><b>and</b></p> <p><b>Online Price Bid:</b> This shall contain the Electronic format of Price Bid. <b>The contractors can view the Tender Opening Details through their respective log-in IDs on the above-mentioned e-Tendering Portal (Website).</b></p>
(e)	The Bidder is expected to examine all instructions, forms, terms and specifications in the bid documents. Failure to furnish all information required as per the Bid Documents or submission of bids not substantially responsive to the Bid Documents in every respect will be at the bidder's risk and shall result in rejection of the bid.
(f)	In case the date of opening of tenders is declared as a holiday / lock-down, the tenders will be opened on the next working day at the same time. <b>Again, corrigenda, if any, are to be followed from <a href="https://www.tenderwizard.com/SBIETENDER">https://www.tenderwizard.com/ SBIETENDER</a>.</b>
(g)	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.
(h)	Tenders received without <b>EMD</b> shall be summarily rejected, and such tenders shall not be allowed to participate in the online price bidding process.
(i)	SBI has the right to accept / reject any / all tenders without assigning any reasons and no correspondence shall be entertained in this regard.
(k)	The intending bidders are to quote their offers item wise in all the items of price bid. If vendor fails to quote their price in any of the items of price bid , the price quoted by the vendor will be assumed as “Zero”. Vendor will be bound to execute the work of the item & the work value of that item will be zero.
(l)	Contractors shall provide all labour and materials, tool and tackles including necessary scaffolding for proper execution of the work including curing etc.
(m)	5% of the value of the executed work will be retained as Security Deposit and will be

	refunded on satisfactory completion of Defect Liability Period period, i.e., 12 (twelve) months from the date of completion of work. No interest shall be payable on Security Deposit.
(n)	Rates quoted shall be inclusive of providing necessary arrangements for satisfactory protection of furniture / flooring / electrical fittings / Bank's any other property during execution of the work.
(o)	Rates shall be inclusive of cost for disposing debris and any other unserviceable materials as per direction and inconformity with the Local or any other govt. authorities' rules.
(p)	Rates shall be inclusive of cleaning of floors, making good to damaged floor, ceiling, walls, etc., after completion of work.
(q)	In case of any poor quality of work or substandard materials used for the purpose, shall be replaced as per instructions without any extra cost.

**Notes:-**

- **Conditional tenders shall be summarily rejected.**
- **SBI reserve their rights to accept or reject any or all the tenders, either in part or whole without assigning any reason(s) for doing so and no claim/correspondence shall be entertained in this regard.**
- **Quantities are tentative and can increase or decrease the quantities of any item and contractor have to execute the same at the quoted rates.**
- The application forms must be submitted in a prescribed format as laid down in the enclosed Annexures.

**The Price bid should be submitted in online mode only as prescribed format given in our Service Provider's portal [www.tenderwizard.in/SBIETENDER](http://www.tenderwizard.in/SBIETENDER).**

Yours Faithfully,

Sd/-

**Assistant General Manager (P&E.)**  
SBI, P&E Deptt., LHO Kolkata

**PROCESS COMPLIANCE STATEMENT (ANNEXURE I)**

*(The bidders are required to print this on their company's letter head and sign, stamp and submit with technical Bid)*

To,  
**M/s. Antares Systems Limited**

**AGREEMENT TO THE PROCESS RELATED TERMS AND CONDITIONS FOR THE e-TENDER OF Air-conditioning WORKS OF PROPOSED TBU AT 1<sup>ST</sup> FLOOR OF SBI ALIPORE BRANCH** This has reference to the Terms & Conditions for the E-tendering mentioned in the Tender document

This letter is to confirm that:

- 1) The undersigned is authorized representative of the company.
- 2) We have studied the Commercial Terms and the Business rules governing the E-tendering as mentioned in RFP of SBI as well as this document and confirm our agreement to them.
- 3) We also confirm that we have taken the training on the E-tendering tool and have understood the functionality of the same thoroughly.
- 4) We confirm that **SBI and M/s. Antares Systems Limited**, shall not be liable & responsible in any manner whatsoever for my/our failure to access & bid on the E-tendering platform due to loss of internet connectivity, electricity failure, virus attack, problems with the PC, any other unforeseen circumstances etc. before or during the E-tendering event.
- 5) We confirm that we have a valid digital signature certificate issued by a valid Certifying Authority.
- 6) We, here by confirm that we will honor the Bids placed by us during the E-tendering process.

With regards,

Date:

Signature with company seal Name:  
Company / Organization:  
Designation within Company /  
Organization:  
Address of Company/Organization :



## INSTRUCTIONS TO THE TENDERERS

**1. Site and its location :- As mentioned above.**

**2. Tender documents**

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, \*) Price bid**

<b>***** IMPORTANT NOTE:</b>
<b>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;</b>
a) Price Bid
b) General Terms & conditions of contract
c) Instructions to Tenderers
d) Drawings
e) Special conditions of contract
f) Technical specification

**The tender documents are not transferable.**

**3. Site Visit:**

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. Earnest Money:**

As mentioned in NIT.

**5. Initial/ Security Deposit :**

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

**6. Total 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). 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.

7. **Additional Security Deposit:** in case L-1 bidder quotes abnormally low rates (i.e. Certain percentage above or below estimated project cost), SBI /the bank may ask such bidder to deposit additional security deposit (ASD) as mentioned in the cautioned note in Page no-4 of this NIT.

**8. 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.

**9. 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 <b>21 days</b> from the date of award of work.
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**10. Validity of tender:**

Tenders shall remain valid and open for acceptance for a period of **90 days** from the date of **e-Tender** . If the tenderer withdraws his/her offer during the value period or makes modifications in his/her original offer which are not accurate, **SBI / Competent Authority has the right to accept/reject any/all tenders without assigning any reasons whatsoever.**

**DECLARATION**

I/We have understood all the above conditions. If I/We fail to start/ or execute work within the stipulated period of time, our Security deposit will be forfeited.

Place:

Date:

Signature of Contractor

**FORM OF TENDER**

To ,

**Assistant General Manager (P&E)**

SBI, P&E Deptt., LHO Kolkata

Dear Sir,

**SUB: AC WORKS OF PROPOSED TBU AT 1<sup>ST</sup> FLOOR OF SBI ALIPORE BRANCH**

1. I/We refer to the tender notice issued by the bank for above work. In connection with the above.

2. I/We do hereby offer to perform, provide, execute, complete and maintain the works in conformity with the drawings, conditions of contract, specifications, and bill of quantities at the respective rates quoted in the bill of quantities.

3. I/We have satisfied myself/ourselves as to the site conditions, examined the drawings and all aspects of the tender conditions.

Subject to above, I/We do hereby agree, should this tender be accepted in whole or in part, to

a) Abide by and fulfil all the terms and provisions of the said conditions annexed hereto.

b) Complete the works within **21 days** from issuance of work order.

4. We have submitted our **Copy of Special term deposit submitted to Bank for empanelment.**

5. We also declare that SBI may take any official actions ,

i) If our offer is withdrawn within the validity period of acceptance.

Or

ii) If the Contract is not executed within 10 days from the date of receipt

Or

iii) If the work is not commenced within 15 days after issue of work order or handing over of site whichever is later.

5. I/We understand that you are not bound to accept the lowest or any tender you receive.

6. Name of Partners/Directors of our Firm :

i)

ii)

iii)

Yours faithfully

Signature:

Designation:

Name of Partner/Director of the firm authorized to Sign or Name of person having power of attorney to sign the contract

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

Signature and address of witness

a) Signature:

Name:

Address:

b) Signature:

Name:

Address:

### ARTICLES OF AGREEMENT

ARTICLES OF AGREEMENT made the \_\_\_\_\_ day of \_\_\_\_\_ 2022

between \_\_\_\_\_

\_\_\_\_\_

of \_\_\_\_\_

(hereinafter called the "Employer") of the one part and \_\_\_\_\_ of \_\_\_\_\_ (hereinafter called "The Contractor") of the other part, where as the Employer is desirous of getting the work of " \_\_\_\_\_ " executed and has caused drawings, conditions of contract, specifications and schedule of quantities etc., describing the works prepared by Bank.

AND WHEREAS the SAID DRAWINGS numbered as per list attached inclusive of and the conditions of contract, specifications and schedule of quantities etc., 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 in the Schedule hereto (hereinafter referred to as "Said Conditions") the works shown upon the said drawings and described in the same specifications and included in the said schedule of quantities for such sum as may be ascertained to be payable in terms of the Bills of Quantities, and which sum is estimated to be Rs. \_\_\_\_\_ (Rupees \_\_\_\_\_ (hereinafter referred to as "Said Contract Amount").

NOW IT IS HEREBY AGREED AS FOLLOWS:

1. In consideration of the said sum 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 in the said drawings and described in the said specifications.
2. The Employer shall pay the contractor the said sum or such sums as shall become payable hereunder at the times and in the manner specified in the said conditions.
3. Tender documents containing work order Notice to the Contractor, Conditions of Contract, Appendix thereto, Special Conditions of Contract, Specifications and Schedule of Quantities with the rates entered therein, shall be read and studied as forming part of this agreement and the parties hereto shall respectively abide by and submit themselves to the conditions and stipulations and perform the agreement on their part respectively in such conditions contained.
4. The contract is neither a fixed lumpsum contract or a piece work contract, but is a contract to carry out work in respect of the entire works to be paid for according to actual measured quantities, including variations from BOQ at the rates contained in the Schedule of rates and Probable bill of quantities or as provided in the said conditions.
5. The Employer reserves to himself the right of altering the drawings and natures of the work, of adding/substitution to or omitting any items of work or having portions of the same carried out through alternate agencies without prejudice to this contract.

- 6. Time shall be considered a the essence of this agreement and the contractor hereby agrees to commence the work soon after the site is handed over to him but within 10 days reckoned from the date of issue of work order to execute the work, as provided for in the said conditions and complete the entire work in **21 days** subject to nevertheless to the provisions for extension of time.
- 7. This agreement and contract shall be deemed to have been made in Kolkata and any questions or dispute rising out of or in any way connected with this Agreement and Contract shall be deemed to have arisen in Kolkata and only the courts in Kolkata shall have jurisdiction to determine the same. The limitation period will be 90 days from the date of dispute having arisen.

AS WITNESS our hand this \_\_\_\_\_ day of \_\_\_\_\_ 2022

Signed by the said in the presence of:

WITNESS : SIGNATURE

NAME :

ADDRESS : EMPLOYER

WITNESS : SIGNATURE

NAME :

ADDRESS :

## GENERAL CONDITIONS OF CONTRACT

Except where provided for in the description of the individual items in the schedule of quantities and in the specifications and conditions laid down hereinafter and, in the drawings, the work shall be carried out as per standard specifications and under the direction of SBI / Consultant.

### 1. INTERPRETATION :

In constructing these conditions, the specifications, the schedule of quantities, tender and Agreement, the following words shall have the meaning herein assigned to them except where the subject or context otherwise requires:

- i) *Client*: The term Client shall denote **STATE BANK OF INDIA** with their **Corporate Centre** at "State Bank Bhavan", Madam Cama Road, Mumbai – 400 021, Maharashtra and **Local Head Office** at "Samriddhi Bhavan", Block B, 9<sup>th</sup> Floor, 1, Strand Road, Kolkata – 700 001, West Bengal and includes Client's representative, successors & assigns.
- ii) *Consultant*: NA
- iii) *Contractor*: The term Contractor shall mean the successful bidder in the e-Tendering vide this NIT , and his / their heirs, legal representatives, assigns and successors.
- iv) **Site : As mentioned above** where the work is to be executed as per the lay-out plans and drawings including any other building (s) thereat allotted by the Bank for the Contractor's use.
- v) *Site Engineer / Project Management Consultant (PMC)*: The Site Engineer / Project Management Consultant shall be the person / organization appointed by the Bank for adstration of construction work.
- vi) *Drawing*: The work is to be carried out in accordance with drawings, specifications, the schedule of quantities and any further drawings or any other instruction, which may be given by the Bank / Consultant, during the execution of the work.

All drawings relating to work given to the Contractor together with a copy of schedule of quantities are to be kept at site and the Bank / Consultant, shall be given access to such drawings or schedule of quantities whenever necessary. Detail fabrication drawings where required are to be prepared by the Contractor and have these approved by Consultants before taking up execution.

The Contractor shall ask in writing for all clarifications on matters occurring anywhere in drawings, specifications and schedule of quantities or to additional instructions at least 15 days ahead from the time when it is required for implementation so that the Bank / Consultant may be able to give decision thereon.

- "The Work" shall mean the work to be executed or done under this contract.
- "Act of Insolvency" shall mean any act as defined by the Presidency Town Insolvency Act or in Provincial Insolvency Act or any amending statutes.
- "The Schedule of Quantities" shall mean the schedule of quantities as specified and forming part of this contract.
- "Priced Schedule of Quantities" shall mean the schedule of quantities duly priced with the accepted quoted rates of the contractor.

**SCOPE:** The Work Consists Of **AC WORKS AT PROPOSED PREMISES AS MENTIONED ABOVE** in Accordance With The Drawings And "Schedule Of Works". It Includes Furnishing All Materials, Labour, Tools And Equipment And Management Necessary For And Incidental To The Construction And Completion Of The Work In conformity with designs, drawings, specifications, bill of quantities, etc. Should any detail, essential for efficient completion of the work be omitted from the drawings / specification, it shall be the responsibility of the contractor to inform the Bank / Consultant and to furnish and install such detail with Bank's / Consultant's concurrence, so that

upon completion of the proposed work the same becomes acceptable.

Bank / Consultant may in their absolute discretion issue further drawings and / or written instructions, details, directions and explanations, which are here after collectively referred to as "The Bank's / Consultant's instructions" in regard to:

- a. The variation or modification of the design quality or quantity of work or the addition or omission or substitution of any work.
- b. Any discrepancy in the drawing or between the schedule of quantities and / or drawing and / or specification.
- c. The removal from the site of any defective material brought thereon by the contractor and the substitution of any other material thereof.
- d. The demolition, removal and / or re-execution of any work executed by the Contractor/s.
- e. The dismissal from the work of any person employed thereupon.
- f. The opening up for inspection of any work covered up.
- g. The rectification and making good of any defects under clauses hereinafter mentioned and those arising during the Defect Liability period.

The contractor shall forthwith comply with and duly execute any work comprised in such Bank's / Consultant's instruction provided always that verbal instruction, directions and explanations given to the Contractor or his representative upon the work by the Bank / Consultant shall, if involving a variation, be confirmed in writing to the Contractors within seven days. No work, for which rates are not specifically mentioned in the priced schedule of quantities, shall be taken up without written permission of the Bank / Consultant. Rates of items not mentioned in the priced schedule of quantities shall be fixed by the Bank in consultation with the Consultant as provided in Clause "Variation".

## **2. DETAILED DRAWINGS AND INSTRUCTIONS :**

The Bank through its consultant shall furnish with reasonable promptness additional instruction by means of drawings or otherwise necessary for proper execution of the work. All such drawings and instructions shall be consistent with contract documents, true documents thereof and reasonably inferable therefrom.

The work shall be executed in conformity therewith and the Contractor shall not work without proper drawings and instructions.

Immediately after receipt of the work order of the contract, the contractor shall prepare a progress schedule and submit the same to the Bank through the Consultant for approval which shall indicate the dates for the starting and completion of the various stages of constructions.

## **3. COPIES FURNISHED:**

The Contractor on the signing hereof of the Contract shall be furnished by the Bank through its Consultant free of charge with a copy of the priced schedule of quantities / rates, two copies of each of the said drawings and one copy of specification and two copies of all further drawings issued during the progress of the work. Any further copies of such drawings required by the contractor shall be supplied on payment by the contractor of the charges therefor.

## **5. OWNERSHIP OF DRAWING:**

All drawings, specification and copies thereof furnished by the Bank through its Consultant are the property of the Bank. They are not to be used on other work, and with the exception of the signed contract set, are to be returned to the Bank on request on completion of the work.

**6. FAILURE BY CONTRACTORS TO COMPLY WITH BANK'S / CONSULTANT'S INSTRUCTIONS :**

If the contractor after receipt of written notice from the Bank and / or the Consultant requiring compliance of any instructions within ten days fails to comply with such instructions, the Bank through the Consultant may employ other person, to carry out any such instructions whatsoever that may be necessary to give effect thereto and pay all cost in connection therewith. The contractor shall either pay the Bank the cost incurred by the Bank in connection therewith or the Bank may release the cost from any money due or to become due to the Contractor.

**• 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 7 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 give 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 his contract without the consent in writing of the SBI 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:

- (a) has abandoned the contract, or,
- (b) has failed to commence the works, or has without any lawful excuse under these conditions suspended the progress of the works for 15 days after receiving from the SBI through the Architect / Consultant written notice to proceed, or,
- (c) 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 SBI through the Architect / Consultant that the said materials were condemned and rejected by the Architect / Consultant under these conditions, or,
- (d) 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 SBI's or Architect's / Consultant's instructions to the contrary subject any part of the contract.

Then and in any of said cases the SBI 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 SBI 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 so determined and as if the works subsequently had been executed by or on behalf of the contractor.

And further the SBI through the Architect / Consultant their agents or employees may enter upon and take possession of the work and all plants, tools, 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 complete 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 completing and finishing or using the materials and plant for the works.

When the works shall be completed or as soon thereafter as convenient the SBI or the



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 15 days after receipt thereof by him the SBI sell the same by public auction 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 SBI incidental to the same of the materials etc.

#### 7. VISIT TO THE SITE:

Intending tenderer shall visit the site and make him thoroughly acquainted with the local site condition, nature and requirements of the work, facilities of transport condition, availability of labour and materials, access and storage for materials and removal of rubbish. The tenderer shall provide in the tender for cost of carriage, freight and other charges as also for any special difficulties and including police restriction for transport etc. for proper execution of work as indicated in the drawings. The successful tenderer will not be entitled to any claim or compensation for difficulties faced or losses incurred on account of any site condition which existed before the commencement of the work or which in the opinion of the Bank / Consultant, might be deemed to have reasonably been inferred as so existing before commencement of work.

#### 8. TENDERS:

The entire tendering process will be conducted on an electronic platform through **M/s. Antares Systems Limited**, the Bank's authorized e-Procurement Agency.

The Bank reserves the right to reject the lowest or any tender and also to discharge any or all of the tenders for each section or to split up and distribute any item of work to any firm or firms, without assigning any reason.

The tenderers should note that the tender is strictly on the item rate basis and their attention is drawn to the fact that the rates for each and every item should be correct, workable and self-supporting. If called upon by the Bank / Consultant, detailed analysis of any or all the rates shall be submitted. The Bank / Consultant shall not be bound to accept the Contractor's rate analysis.

The work will be paid for as "measured work" on the basis of actual work done and not as "lump sum" contract.

All items of work described in the schedule of quantities are to be deemed and paid as complete work in all respects and details including preparatory and finishing work involved, directly related to and reasonably detectable from the drawings, specifications and schedule of quantities and no further extra charges will be allowed in this connection.

The Bank has power to add to / omit from any work as shown in drawings or described in specifications or included in schedule of quantities and intimate the same in writing but no addition, omission or variation shall be made by the contractor without authorization from the Bank. No variation shall vitiate the contract.

The tenderer shall note that his tender shall remain valid for consideration for a period of 90 (ninety) days from the date of opening of tender.

#### 9. TENDER DOCUMENTS:

The work has to be carried out strictly according to the conditions stipulated in tender consisting of the documents as NIT, Instructions to the Tenderers, General Conditions of Contract, Special Conditions of Contract, Technical Specifications, Price Bid, Drawings, etc.

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 as Price Bid, Additional specification, Technical specification, Drawings, Special conditions of contract, GCC, instructions to Tenderers.

#### 10. AGREEMENT:

The successful tenderer shall sign the agreement as per draft agreement annexed herewith (Annexure I) within 10 days (If instructed by the bank) from the date of issue of formal work order and he shall pay for all stamps and legal expenses, incidental thereto. However, the written acceptance of the tender by the Bank / Consultant will constitute a binding contract between the Bank and the person so tendering whether such formal agreement is or is not subsequently

executed.

#### 11. PERMITS AND LICENSES:

Permits and licenses for release of materials which are under Government control shall be arranged by the contractor on behalf of the Bank. The Bank will sign any form or application that may be necessary for the purpose.

It may be clearly understood that no compensation or additional charges can be claimed by the contractor for non-receipt of any such controlled material in due time.

The contractor will, however, be eligible to a proportionate extension of time on this account which in the opinion of the Bank / Consultant is reasonable. The Contractor shall at his own cost arrange for storage shed adequate for taking delivery and storing of the materials including any incidentals cost for obtaining permits and licenses etc. The costs for storing, transporting, handling etc. are to be included by the contractor in his quoted rate.

#### 12. GOVERNMENT AND LOCAL RULES:

The Contractor shall conform to the provisions of all local By-laws and Act relating to the work and to the Regulations, etc., of the Government and Local Authorities and of any Bank with whose system the premises is proposed to be connected. The Contractor shall give all notices required by the said Act, Rules, Regulations and By laws etc. and pay all fees payable to such authority / authorities for execution of the work involved. The cost, if any, shall be deemed to have been included in his quoted rates, taking into account all liabilities for licenses, fees for footpath encroachment and restorations etc. and shall defend all actions arising from such claims or liabilities.

#### 13. TAXES AND DUTIES:

The tenderers must include in their tender prices quoted for all duties, royalties, cess, excise, sales tax, work contract tax or any other taxes or local charges, as applicable. No extra claim on this account will in any case be entertained. However, GST as per GST act will be paid on production of GST Registration Certificate and on claim.

#### 14. WATER & ELECTRICITY:

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 conditions:

- i) That the water used by the contractor shall be fit for construction purposes to the satisfaction of the Bank or the Architect / Consultant.
- 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 Bank or the Architect / Consultant is unsatisfactory.
- iii) The contractor shall construct temporary well / tube well in SBI land for taking water for construction purposes only after obtaining permission in writing from the SBI. The contractor has to make his own arrangement 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 SBI without any compensation as directed by the Bank or the Architect / Consultant.
- iv) The contractor shall make his own arrangements for **power and supply / distribution system** for driving plant or machinery for the work and for lighting purposes at his own cost. The cost of running and maintenance of the plants are to include in his tender prices. He shall pay all fees and hold the owner free from all such costs. He has to obtain necessary approval from the appropriate authorities, if required.

**15. PROVISIONAL SUMS (P. S.):**

All provisional sum IF described in the schedule of quantities as P.S. shall be exclusively allotted to the purchase of materials and not for any handling / fixing to be done by the contractor. Such costs of handling and fixing with profit (including transport charge if required) shall be separately included in the contract price as described in the schedule of quantities. The disposal of the amounts covered under this head will be absolutely at the discretion of the Bank. Contractor is to make payments for these materials to the suppliers on certificate or orders issued by the Bank / Consultant and realize the payment from the Employee thus made through his bills for work done.

**16. QUANTITY OF WORK TO BE EXECUTED:**

The quantities shown in the Schedule of quantities are intended to cover the entire new structure indicated in the drawing but the Bank reserves the right to execute only a part or the whole or any excess thereof without assigning any reason therefore. If at any time after the commencement of the work, the Bank / Consultant shall, for any reason whatsoever, not require the whole work thereof as specified in the tender to be carried out the Consultant / Bank shall give notice in writing of the fact to the contractor who shall have no claim to any payment as compensation whatsoever on account of any profit or advantage which he might have derived from the execution of the work in full, but which he did not derive in consequence of the full amount of the work not having been carried out; neither shall he have any claim for compensation by reason of any alterations having been made in the original specification, drawing, designs and instructions which shall involve any curtailment of the work as originally contemplated.

**17. OTHER PERSONS ENGAGED BY THE BANK:**

The Bank reserves the right to execute any part of the work included in this contract or any work which is not included in this contract by other Agency or persons and the Contractor shall allow all reasonable facilities and use of any scaffolding etc. for the execution of such work. All the agencies employed by the Bank on the work shall act in close co-ordination extend mutual assistance to enable completion of the work satisfactorily.

**18. EARNEST MONEY, TENDER APPLICATION FEE AND SECURITY DEPOSIT / RETENTION MONEY:**

**Value of EMD :** As mentioned in NIT

**Value of ISD :** As mentioned in NIT

**Retention Money** shall be deducted from progressive running bills 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., retention money shall not exceed 5% of the contract value.

The retention money will not be deducted if adequate Bank Guarantee on a Nationalized Bank is submitted by the contractor.

50% of the total security deposit will be refunded to the Contractor subject to the issue of virtual completion certificate by the Bank / Consultant and Contractor removing his materials, equipment, labour force, temporary shed / stores etc. from the site. The Balance 50% will be refunded to the contractor 30

(Thirty) days after end of "Defect Liability Period" provided he has satisfactorily carried out all the work, submitted all documents contractually called for and attended to all defects during defect liability period in accordance with the conditions of contract. No interest is allowed on retention money and earnest money deposit.

Further, if some dues to the Bank from the Contractor (s) have still to be recovered, the Bank reserves the right to withhold payment of so much of the retention money as in his opinion, represents the cost of the same.

**19. CONTRACTOR TO PROVIDE EVERYTHING NECESSARY:**

The Contractor shall provide everything necessary for the proper execution of the work according to the intent and meaning of the drawing, schedule of quantities and specifications taken together whether the same may or may not be particularly shown or described therein provided that the same can reasonably be inferred there from and if the Contractor finds any discrepancies therein he shall immediately and in writing refer the same to the Bank / Consultant whose decision shall be final and binding. The Contractor shall provide himself for ground and fresh water for carrying out the work at his own cost. The Bank shall on no account be responsible for the expenses incurred by the Contractor for hired ground or fresh water obtained from elsewhere.

The rates quoted against individual items will be inclusive of everything necessary to complete the said items of work within the contemplation of the contract, and beyond the unit price no extra payment will be allowed for incidental or contingent work, labour and / or materials inclusive of all taxes and duties whatsoever except for specific items, if any stipulated in the tender documents.

The Contractor shall supply, fix and maintain at his own cost for the execution of any work, all tools, tackles, machineries and equipment's and all the necessary centering, scaffolding, staging, planking, timbering, strutting, shoring, pumping, fencing, boarding, watching and lighting by night as well as by day required not only for the proper execution and protection of the said work but also for the protection of the public and safety of any adjacent roads, streets, walls, houses, buildings, all other erections, matters and things and the contractor shall take down and remove any or all such centering, scaffolding planking, timbering, strutting, shoring etc. on occasions as required or when ordered so to do and shall fully reinstate and make good all matters and things disturbed during the execution of work to the satisfaction of the Bank / Consultant.

The Contractor, if required, shall also provide such road on site as may be necessary for the proper performance of the contract and for his own convenience but not otherwise. Upon completion, such road shall be broken up and leveled where so required unless the Bank shall otherwise direct.

The Contractor shall at all times give access to workers employed by the Bank or any men employed on the building and to provide such parties with proper, sufficient and if required, special scaffolding, hoists and ladders and provide them with water and lighting and leave or make any holes, grooves etc. in any work, where directed by the Bank / Consultant as may be required to enable such workman to lay or fix pipes, Air-conditioning wiring, special fittings etc. The quoted rate of the tenderers shall accordingly include all these above mentioned contingent work.

**20. TIME OF COMPLETION / EXTENSION OF TIME AND PROGRESS CHARTS:****a) Time of Completion:**

The entire work is to be completed in all respects within the stipulated period of **21 days** (including Sundays and Holidays) from the Date of Issue of the Work Order or the Site Handover Date, whichever is later. The work shall be deemed to be commenced within 7 (seven) days from the issue of formal work order or the date on which the Contractor is instructed to take possession of the site, whichever is later. Time is the essence of the contract and shall be strictly observed by the Contractor.

The work shall not be considered as complete until the Bank / Consultant have certified in writing that this has been completed and the Defects Liability Period shall commence from the date of such certificate.

**b) Extension of Time:**

If in the opinion of the Bank / Consultant, the work be delayed for –

- delayed handing over of site
- by reason of any exceptionally inclement weather

- by reason of instructions from the Bank / Consultant in consequence of proceedings taken or threatened by or disputes, with adjoining or neighboring owners
- by the work, or delay of other contractors or tradesmen engaged or nominated by the Bank / Consultant and not referred to in the specification
- by reason of authorized extra and additions
- by reason of any combination of workman or strikes or lockout affecting any of the building trades
- from other causes which the Bank / Consultant may consider are beyond the control of the contractor, the Bank / Consultant at the completion of the time allowed for the contract shall make fair and reasonable extension of time for completion in respect therefor.

In case of such strikes or lock-outs, as are referred to above, the contractor shall immediately give the Bank / Consultant written notice thereof. Nevertheless, the contractor shall use his best endeavors to prevent delay, and shall do all that as may be reasonably required, to the satisfaction of the Bank / Consultant to proceed with the work and on his so doing it will be ground of consideration by the Bank / Consultant for an extension of time as above provided. The decision of the Bank as to the period to be allowed for an extension of time for completion hereunder (which decision shall be final and binding on the contractor) shall be promulgated at the conclusion of such strike or lock-out and the Bank shall then, in the event of extension being granted, determine and declare the final completion date. The provision in clause 19 with respect to payment of liquidated damages shall, in such case be read and construed as if the extended date fixed by the Bank / Consultant were substituted for and the damage shall be deducted accordingly.

**c) Progress of work / work programme:**

During the period of construction the contractor shall maintain proportionate progress on the basis of a programme chart submitted by the Contractor immediately before commencement of work and agreed to by the Bank / Consultant. Contractor should also include planning for procurement of scarce material well in advance and reflect the same in the programme chart so that there is no delay in completion of the project.

**21. LIQUIDATED DAMAGES:**

Should the work be not completed to the satisfaction of the Bank / Consultant within the stipulated period, the contractor shall be bound to pay to the Bank a sum calculated @ **0.5 %** of the accepted Contract Price per week of delay, subject to a maximum of **5%** of the Contract Price or Certified Bill Value, whichever is higher, by way of liquidated damages and not as penalty during which the work remains uncompleted or unfinished after the expiry of the completion date.

• **Addendum to Liquidated Damages Clause:**

The parties hereby agree that due to negligence of act of the Contractor, if the employer suffers losses, damages, the quantification of which may be difficult, and hence the amount specified hereunder shall be construed as reasonable estimate of the damages and the Contractor agree to pay such liquidated damages, as defined hereunder as per the provisions of this Contract. The amount of liquidated damages under this Contract shall not exceed 5% of the Contract Price or Certified Bill Value, whichever is higher. The liquidated damages shall be applicable under following circumstances:

- (i) If the deliverables are not submitted as per schedule and time, the Contractor shall be liable to pay 1% of the total cost of the services for delay of each week or part thereof.
- (ii) If the deliverables are not acceptable to the Employer, and defects are not rectified to the satisfaction of the Employer within 30 days of the receipt of the notice, the Contractor shall be liable for Liquidated Damages for an amount equal to 0.5% of total cost of the services for every week or part thereof for the delay.

Any delay beyond this, STATE BANK OF INDIA shall be free to terminate the contract and get the work done from an alternate source at the risk of the contractor, besides forfeiting ISD. The decision of the Bank as to the period of delay on the part of the contractor and the quantum of compensation for such delay shall be final and binding on the contractor. If the contractor is unavoidably hindered in carrying out the work on account of delayed decision or the approval by the Bank, which are necessary to carry out further work, he shall be allowed suitable extension of time by concerned authority of the Project, whose decision shall be final and binding on the contractor. No claim of the contractor shall be entertained against the Bank for such delayed approvals / decisions by the Corporation, excepting suitable extension of time.

## **22. ACTION WHEN WHOLE OF 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 liquidated damages amounting to the whole of his security deposit (whether paid in one sum or deducted by installments) the Bank / Consultant shall have power to adopt any of the following courses as they may deem best suited to the interest of the Bank:

- a) To rescind the contract (of which rescission notice in writing to the contractor under hand of the Bank shall be conclusive evidence) and in which case the security deposit of the contractor shall stand forfeited and be absolutely at the disposal of the Bank.
- b) To employ labour paid by the Bank and supply materials to carry out the work, or any part of the work, debiting the contractor with the cost of the labour and price of material (of the amount of which cost and price of a certificate of the Consultant shall be 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 rates as if had been carried out by the contractor under the terms of this contract. The certificate of the Consultant as to the value of the work done shall be final and conclusive against the contractor.
- c) To measure up the work of the contractor, and to take such part thereof as shall be 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 (of the amount of which excess the certificates in writing of the Consultants shall be final and conclusive) shall be binding and paid by the original contractor and may be deducted from any money due to him by the Bank under the contract or otherwise or from his security deposit or the proceeds of sale thereof, or a sufficient part thereof.
- d)

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

### **23. TOOLS, STORAGE OF MATERIALS, PROTECTIVE WORKS AND SITE OFFICE REQUIREMENTS:**

The Contractor shall provide, fix up and maintain in an approved position proper office accommodation for the Contractor's representative and staff, which offices shall be open at all reasonable hours to receive instruction notices or communications and clear away on completion of the work and make good all work disturbed.

All drawing maintained on the site are to be carefully mounted on boards of appropriate size. They are to be protected from ravages of termites, ants and other insects.

The Contractor, if called for, shall provide at his own cost all artificial light required for work and to enable other contractors and sub-contractors to complete the work within the specified time.

The Contractor, if called for, shall provide a suitable temporary hut for the watchmen and clear away the same when no longer required and to provide all necessary attendance, lights etc. required.

The Contractor, if called for, shall arrange for temporary latrines for the use of workers and field staff and keep the same in a clean and sanitary condition to the satisfaction of the Public Health Authorities and shall cause such latrines and soil to be cleared away whenever necessary and shall make good all the work disturbed by these conveniences.

Every precaution shall be taken by the Contractor to prevent the breeding of mosquitoes on the work during the construction and all receptacles, cisterns, water tanks etc. used for storage of water must be suitably protected against, breeding of mosquitoes. The Contractor shall indemnify the Bank against any breach of rules in respect of anti-malarial measures. The Contractor shall not fix or place any placards or advertisement of any description or permit the same to be fixed or placed in or upon any boarding gantry, building structure other than those approved by the Bank.

#### **Protective Measures**

The contractor from the time of being placed in possession of the site must make suitable arrangements for watching, lighting and protecting the work, the site and surrounding property by day, by night, on Sunday and other holidays.

The Contractor shall indemnify the Bank against any possible damage to the building, roads or member of the public in courses of execution of the work.

The Contractor shall provide necessary temporary enclosures, gates, entrances etc. for the protection of the work and materials and for altering and adopting the same as may be required and removing on completion of the work and making good all work disturbed.

#### **Storage of Materials**

The Contractor shall provide and maintain proper sheds for the proper storage and adequate protection of the materials etc. and other work that may be executed on the site including the tools and materials of sub-contractors and remove the same on completion. Sheds for storage of cement are to have pucca floor raised above the ground. Cement godown shall be constructed for storing about six weeks requirements of cement and stored as per norms with a stack of 10 bags each, 2 ft. opening all around with 2 ft. passage between each stack.

Structure shall be waterproof from all the sides and top. Cement should be stored one ft. above the ground level and have pucca raised floor.

So also reinforcement bars are to be stored above the ground level to prevent the same from getting rusted.

#### **Tools**

All tools, equipment's and instruments as instructed by the Bank / Consultant and considered necessary for the work shall be provided by the Contractor for the due performance of this contract.

All measuring tapes shall be of steel and suitable scaffolding and ladders that may be required for safely taking measurement shall be supplied by the contractor.

The workmen and the supervisors on the work shall carry with them always a steel tape, a spirit

level,

a plumb bob and a square and shall check the work to see that the same is being done according to the drawing and specifications. The site Engineer will use any or all measuring instruments or tools belonging to the contractor as he chooses for checking the work executed or being executed on the contract.

The Contractor should cover in his rates for making provisions for all reasonable facilities for the use of his scaffolding, tools and plant etc. by sub-contractors for their work.

#### **24. NOTICE AND PATENTS OF APPROPRIATE AUTHORITY AND OWNERS:**

The Contractor shall conform to the provisions of any Acts of the Legislature relating to the work and to the Regulations and Bylaws of any authorities, and / or any water, lighting and other companies, and / or authorities with whose system the structures were proposed to have connection and shall before making any variations from the drawings or specification that may be associated to so conform, give the Bank / Consultant written notices specifying the variations proposed to be made and the reasons for making them and apply for instruction thereon. The Bank / Consultant on receipt of such intimation shall give a decision within a reasonable time.

The contractor/s shall arrange to give all notices required for by the said Acts. Regulations or Bylaws to be given to any authority and to pay to such authority or to any public officer all fees that may be properly chargeable in respect of the work and lodge the receipts with the Bank.

The Contractor shall indemnify the Bank against all claims in respect of patent right, royalties, damages to buildings, roads or members of public in course of execution of work and shall defend all action arising from such claims and shall keep the Bank saved harmless and indemnified in all respects from such actions, costs and expenses.

#### **25. CLEARING SITE AND SETTING OUT WORKS :**

The site shown on the plan shall be cleared of all obstruction, trees, bushes, shrubs, loose stone and rubbish materials of all kinds. All holes or hollows whether original, existing or produced by removal of loose stone or materials shall be carefully filled up with earth well rammed and leveled off as directed at his own cost.

The Contractor shall set out the work and shall be responsible for the true and perfect setting out of the work and for the correctness of the position, levels, dimensions and alignment of all parts thereof. If at any time, any error shall appear during the progress of any part of the work, the Contractor shall at his own expenses rectify such error, if called upon to the satisfaction of the Bank / Consultant. The Contractor shall further set out the work to the alternative positions at the site until one is finally approved and the rates quoted in his tender should include for this and no extra on this account will be entertained.

#### **Safety Warnings at Site:**

The Contractor shall have to arrange necessary flex signages depicting statutory warnings viz. "RESTRICTED AREA : WORK IN PROGRESS", "MEN AT WORK", etc.

#### **26. DATUM:**

The average ground level will be considered as the crown of the nearest road, which should be taken as "Datum" which is however, subject to final confirmation by the Bank / Consultant. All levels shown in the drawings are to be strictly adhered to.

#### **27. BENCHES :**

The Contractor is to construct and maintain proper benches of all the main walls, in order that the lines and levels may be accurately checked at all times.

These benches will consist of timber posts of adequate length and minimum diameter 75 mm to be



driven in the ground at suitable distance as directed encased with brick work. The wire nails will be driven on the top of timber posts on the centre lines of columns, walls, inside and outside face of foundation trenches. Centre line of walls, columns etc. may be clearly indicated and checked at any time if it is so required.

**28. CONTRACTOR IMMEDIATELY TO REMOVE ALL OFFENSIVE MATTERS:**

All soil, filth or other matters of any offensive nature taken out of any trench, sewer, drain, cesspool or other place shall not be deposited on the surface but shall be once be carted away by the Contractor to a safe place as per rules of the appropriate authorities. The Contractor shall keep the foundation and work free from water and shall provide and maintain at his own expenses electrically or other power driven pumps and other plant to the satisfaction of the Bank for the purpose, until the building is handed over to the Bank. The Contractor shall arrange for the disposal of the water so accumulated to the satisfaction of the Bank and the local authority and no claims will be entertained afterwards if he does not include in his rates for the purpose.

**29. ACCESS:**

Any authorized representative of the Bank / Consultant shall at all reasonable times have free access to the work and / or to the workshops, factories or other places where materials are being prepared or constructed for the work and also to any place where the materials are lying or from where they are being obtained, and the contractor shall give every facility to the Bank or their representatives necessary for inspection and examination and test of the materials and workmanship. Except the representatives of the Bank and Consultant no person shall be allowed at any time without the written permission of the Bank.

**30. MATERIALS, WORKMANSHIP, SAMPLES, TESTING OF MATERIALS :**

All the work specified and provided for in the specification or which may be required to be done in order to perform and complete any part thereof shall be executed in the best and most workman like manner with materials of the best and approved quality of the respective kinds in accordance with the particulars contained in and implied by the specifications and as represented by the drawings or according to such other additional particulars and instructions as may from time to time be given by the Bank / Consultant during the execution of the work, and to his entire satisfaction.

If required by the Bank / Consultant, the Contractor shall have to carry out tests on materials and workmanship in approved materials testing laboratories or as prescribed by Bank / Consultant at his own cost to prove that the materials etc. under test conform to the relevant I.S. standards or as specified in the specification. No extra payment on this account should in any case be entertained.

A list of Mandatory Tests is given in Technical Specification which is only indicative and not exhaustive. Any other tests, special or routine, on any material or workmanship, advised to be done by the Bank / Consultant for any reason shall be done by the contractor for which no additional payment will be made.

All the materials, stores & equipment's required for full performance of the work under the contract must be provided through normal channels and must include charge for sales tax, import duties and other charges as applicable and must be best of their kind available and the Contractor/s must be entirely responsible for the proper and efficient carrying out of the work. The work must be done in the best workmanship manner. Samples of all materials to be used shall be submitted to the Bank / Consultant and written approval from the Bank / Consultant shall be obtained prior to placement of order. A list of materials of approved make and brand is annexed. Materials mentioned in the said list shall be used. In case materials specified in the list are not available the Contractor/s may use the equivalent product with prior permission from the Bank / Consultant. As regards equivalent product / material the opinion of the Bank / Consultant shall be final and binding on the Contractor.

During the inclement weather the Contractor shall suspend concreting and plastering for such time as the Bank / Consultant may direct and shall protect from injury all work during its course of execution. Any damage (during construction) to any part of the work for any reasons due to rain, storm or neglect of contractor, shall be rectified by the contractor in an approved manner at no extra cost.

Should the work be suspended by reason of rain, strike, lock-outs or any other cause, the Contractor shall take all precaution necessary for the protection of work and at his own expenses shall make good any damage arising from any of these causes.

The Contractor shall cover up and protect from damage, from any cause, all new work and supply all temporary doors, protection to windows, and any other requisite protection for the execution of the work whether by himself or special tradesman or sub-contractor and any damage caused must be made good by the contractor at his own expenses.

**31. REMOVAL OF IMPROPER WORK:**

The Bank / Consultant shall during the progress of the work have power to order in writing from time to time the removal from the work within such reasonable time or times as may be specified in the order of any materials which in the opinion of the Bank / Consultant are not in accordance with specification or instruction, the substitutions or proper re-execution of any work executed with materials or workmanship not in accordance with the drawings and specifications or instruction. In case the Contractor refuses to comply with the order Bank / Consultant shall have the power to employ and pay other agencies to carry out the work and all expenses consequent thereon or incidental thereto as certified by the Consultant shall be borne by the contractor or may be deducted from any money due to or that may become due to the contractor. No certificate which may be given by the Consultant shall relieve the Contractor from his liability in respect of unsound work or bad materials.

**32. SITE ENGINEER / PROJECT MANAGEMENT CONSULTANT (P. M. C.):**

The term "Site Engineer" shall mean the person if, any, appointed and paid by the Bank to superintendent the work. The Contractor shall afford the Site Engineer every facility and assistance for exang the work and materials and for checking and measuring work and materials. The Site Engineer shall have no power to revoke, alter, enlarge or relax any requirements of the Contract or to sanction any day work, additions, alterations, deviations or omission or any extra work whatever, except in so far as such authority may be specially conferred by a written order of the Bank / Consultant.

The Site Engineer shall have power to give notice to the Contractor or to his foreman, of non-approval of any work or materials and such work shall be suspended or the use of such materials shall be discontinued until the decision of the Bank / Consultant is obtained. The work will from time to time be examined by the Consultant / Bank or his authorized representative and the Site Engineer. But such examination shall not in any way exonerate the Contractor from the obligation to remedy any defects, which may be found to exist at any stage of work or after the same is complete. Subject to the limitations of this clause the Contractor shall take instructions only from the Consultant / Bank.

**33. OFFICE ACCOMMODATION FOR THE SITE ENGINEER / P.M.C.:**

The Contractor shall provide erect and maintain at his cost a separate simple watertight office accommodation for the Site Engineer / PMC in case it is not already available at site. This accommodation shall be well lighted and ventilated and provided with windows, door with a lock. The Sit Engineer's / PMC's office shall be minimum of 14 Sqm (150 Sq.ft.) and the Contractor shall provide a desk, chair, drawers for keeping drawings, a cupboard having proper lock and backboard for displaying drawings and lights and fans. The accommodation shall be demolished when directed.

**34. CONTRACTOR'S EMPLOYEES:**

The Contractor shall employ technically qualified and competent supervisors for the work who

shall be available (by turn) throughout the working hours to receive and comply with instruction of the Bank / Consultant. The Contractor shall engage at least one experienced Technical representative as Site-in-Charge for execution of the work. The Contractor shall employ in connection with the work persons having the appropriate skill or ability to perform their job efficiently.

The Contractor shall employ local labourers on the work as far possible. No labourer below the age of sixteen years and not an Indian National shall be employed on the work.

Any labour supplied by the Contractor to be engaged on the work on day-work basis either wholly or partly under the direct order or control of the Bank or his representative shall be deemed to be a person employed by the contractor.

The Contractor shall comply with the provisions of all labour legislation including the requirements of the following –

- a) The Payment of Wages Act
- b) Bank's Liability Act
- c) Workman's Compensation Act
- d) Contract Labour (Regulation and Abolition) Act, 1970 and Central Rules 1971.
- e) Apprentices Act 1961
- f) Any other Act or enactment relating thereto and rules framed there under from time to time.

The Contractor shall keep the Bank saved harmless and indemnified against claims of any of the workmen and all costs and expenses as may be incurred by the Bank in connection with any claim that may be made by any workman are recoverable from the Contractor.

The Contractor shall comply at his cost with order of requirement of any Health Officer of the State or any local authority or of the Bank regarding the maintenance of proper environmental sanitation of the area where the Contractor's labourers are housed or accommodated, for the prevention of small-pox, cholera, plague, typhoid, malaria and other contagious diseases. The contractor shall provide, maintain and keep in good sanitary condition adequate sanitary accommodation and provide facilities for pure drinking water at all time for the use of men engaged on the work and shall remove and clear away the same on completion of work. Adequate precaution shall be taken by the Contractor or prevent nuisance of any kind on the work or on the lands adjoining the same.

The Contractor shall arrange to provide first aid treatment to the labourers engaged on the work. He shall within 24 hours of occurrence of any accident at or about the site or in connection with execution of work, report such accident to the Bank and also to the competent authority where such report is required by law.

### **35. DISMISSAL OF WORKMEN:**

The Contractor shall on the request of the Bank / Consultant immediately dismiss from work any person employed thereon by him, who may in the opinion of the Bank / Consultant be unsuitable or incompetent or who may misconduct himself. Such discharge shall not be the basis of any claim for compensation or damages against the Bank / Consultant or any of their officer / employee.

### **36. ASSIGNMENT:**

The whole of the work included in the contract shall be executed by the Contractor and the Contractor shall not directly or indirectly transfer, assign or underlet or any part, share or interest therein nor, shall take a new partner, without written consent of the Bank and no subletting shall relieve the Contractor from the full and entire responsibility of the contract or from active superintendence of the work during their progress.

### **37. NOMINATED SUB-CONTRACTOR:**

All specialists, Merchants, Tradesmen and others executing any work or supplying and fixing any goods for which prime cost prices or provisional sums are included in the Schedule of Quantities / Rates and / or specification who may be nominated or selected by the Consultant /

Bank are hereby declared to be sub- contractors employed by the contractor and are herein referred to as nominated sub-contractors.

No nominated sub-contractor shall be employed on or in connection with the work against which contractor shall make reasonable objection or save where the Bank and Consultant shall otherwise agree who will not enter into a contract provided –

- a) That the nominated sub-contractor shall indemnify the Contractor against the same obligation in respect of the sub-contract as the Contractor is under in respect of this contract.
- b) That the nominated sub-contractor shall indemnify the Contractor against claims in respect of any negligence by the sub-contractor, his servants or agents or any misuse by him or them of any scaffolding or other plants and property of the contractor or under any Workman's Compensation Act in force.
- c) Payment shall be made to the nominated sub-contractor within 14 days of his receipt of the Consultant's certificate provided that before any certificate is issued the contractor shall upon request furnish to the Consultant proof that all nominated sub-contractors accounts included in previous certification have been duly discharged, in default thereof the Bank may pay the same upon a certificate of the Consultant and deduct the amount thereof from any sums due to the contractor. The exercise of those powers shall not create probity of contract between the Bank and the Sub-contractor.

### **38. DAMAGE TO PERSONS AND PROPERTY, INSURANCE, etc.:**

The Contractor shall be responsible for all injury to the work or workmen, to persons, animal or things and for all damages to the structural and / or decorative part of property which may arise from the operations or neglect of himself or of any Sub-contractor or of any of his or a sub-contractor's employees, whether such injury or damage arise from carelessness, accident or any of his or a sub-contractor's employees, or any other cause whatsoever in any way connected with the carrying out of this contract. The clause shall be held to include inter-alia, any damage to buildings whether immediately adjacent or otherwise and any damage to roads, streets, footpaths or ways as well as damage caused to the buildings and the work forming the subject of this contract by rain, wind or other inclemency of the weather. The Contractor shall indemnify the Bank and hold harmless in respect of all and any expenses arising from any such injury or damages to persons or property as aforesaid and also in respect of any claim made in respect of injury or damage under any acts of compensation or damage consequent upon such claim.

The Contractor shall reinstate all damage of every sort mentioned in this clause, so as to deliver the whole of the contract work complete and perfect in every respect and so as to make good or otherwise satisfy all claims for damages to the property or third parties.

### **39. INSURANCE:**

**39.1** Without limiting his obligations and responsibilities under the contract, the contractor shall insure in the joint names of the State Bank of India and the contractor against all loss of damages from whatever cause arising other than the excepted risk, for which he is responsible under the terms of contract and in such a manner that the State Bank of India and contractor are covered for the period stipulated under **Clause 20** 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 contract in the course of any operations carried out by him for the purpose of complying with his obligations under clause.

- a) 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 work at their replacement value.

- b) 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.
- c) Such insurance shall be in effect with an insurer and in terms approved by the State Bank of India which approval shall not be unreasonably withheld and the contractor shall whenever required produce to the Architect / consultant the policy of insurance and he receipts for payment of the current premiums.

### **39.2 Damage to persons and property**

The contractor shall, except if and so far as the contract provides otherwise indemnify the State Bank of India 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 of occupation of land by or any part thereof.
- b) The rights of State Bank of India 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 State Bank of India 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 State Bank of India, their employees, or agents or other contractors for the damage or injury.

### **39.3 Contractor to indemnify State Bank of India**

The contractor shall indemnify the STATE BANK OF INDIA against all claims, proceedings, damages, costs, charges and expenses in respect of the matters referred to in the provision mentioned in this NIT.

### **39.4 Contractor's superintendence**

The contractor shall fully indemnify and keep indemnified the State Bank of India 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 which may be payable in respect of any article or part thereof included in the contract. In the event of any claim made under or action brought against STATE BANK OF INDIA in respect of such matters as aforesaid the contractor shall be immediately notified thereof and the contractor shall be 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 STATE BANK OF INDIA 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.

### **39.5 Third party insurance**

**39.5.1** Before commencing the execution of the work the contractor but without limiting his obligations and responsibilities under **Clause 24** 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 STATE BANK OF INDIA, or to any person, including any employee of the STATE BANK OF INDIA,

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 37** thereof.

### **39.5.2 Minimum Amount of Third party Insurance**

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

**39.6** The Minimum insurance cover for physical property, injury, and death is Rs.5.00 Lakh per occurrence with the number of occurrence limited to four. After each occurrence contractor will pay premium to make insurance valid for four occurrences always.

### **39.7 ACCIDENT OR INJURY TO WORKMAN**

**39.7.1** **The State Bank of India shall not be liable for or in respect of 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 State Bank of India or their agents, or employees. The contractor shall indemnify and keep indemnify State Bank of India against all such damages and compensation, save and except as aforesaid, and against STATE BANK OF INDIA claims, proceedings, costs, charges and expenses whatsoever in respect thereof or in relation thereto.

### **39.7.2 Insurance against accident etc. to workmen**

The contractor shall insure against such liability with an insurer approved by the State Bank of India 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 an sub-contractor the contractor's obligation to insure as aforesaid under this sub-clause shall be satisfied if the sub-contractor shall have insured against the liability in respect of such person in such manner that State Bank of India 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.

### **39.7.3 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 the terms of contract, then and in any such case the State Bank of India 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 State Bank of India as aforesaid from any amount due or which may become due to the contractor, or recover the same as debt from the contractor. In addition, an amount of penalty of Rs. 1.00 lakh will be imposed and to be recovered from the proceedings of any bill due to be paid to the contractor.

**39.7.4** Without prejudice to the others rights of the State Bank of India 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 State Bank of India 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.

**40. ACCOUNT RECEIPTS AND VOUCHERS:**

The Contractor shall upon the request of the Bank / Consultant furnish them with all the invoices, accounts, receipts and other vouchers that they may require in connection with the work under this contract.

If the Contractor shall use materials less than what he is required under the contract, the value of the difference in the quantity of the materials he was required to use and that he actually used shall be deducted from his dues. The decision of the Bank shall be final and binding on the Contractor as to the amount of materials the Contractor is required to use for any work under this contract.

**41. MEASUREMENT OF WORK :**

The Contractor will record and submit to the Project Management Consultant / Site Engineer / Consultant / Bank with the details of measurements for their scrutiny and signature. The Contractor should submit the bill with such endorsement of PMC / Site Engineer / Consultant / Bank.

On receipt of the bill, the Consultant shall intimate the contractor that he requires the work to be measured, and the contractor shall forthwith attend or send a qualified agent to assist the Consultant or the Consultant's representative in taking such measurements and calculations and to furnish all particulars or to give all assistance required by them.

The Contractor or his Agents may at the time of measurements take such notes and measurements as he may require. All authorized extra work, omissions and all variations made without the Consultants knowledge, if subsequently sanctioned by him in writing, with the approval of the Bank shall be included in such measurements. The final measurement should be done within one month from the date of completion of work jointly by the Consultant and / or his representative and if the contractor fails to comply, the measurements taken by the Consultant will be final and binding.

**42. METHOD OF MEASUREMENT:**

Unless otherwise mentioned elsewhere in the tender, measurement will be on the net quantities of work produced in accordance with up-to-date rules laid down by the Indian Standard Institution. In the event of any dispute with regard to the measurement of the work excluded the decision of the Consultant / Bank shall be final and binding on the Contractor.

**43. ACTION WHERE NO SPECIFICATION:**

In the case of any of work for which there is no such specification in Technical Specification such work shall be carried out in accordance with the I.S. Specification and in the event of there being no IS Specification, then in such case the work shall be carried out in all respects in accordance with the instructions and requirements of the Consultant / Bank.

**44. CONTRACTOR NOT TO DEPOSIT MATERIALS IN A MANNER THAT MAY CAUSE INCONVENIENCE TO THE PUBLIC :**

The Contractor (s) shall not deposit materials locations, which will cause inconvenience to the public. The Consultant may require the contractor to remove any materials, which are considered by him to be a danger or inconvenient to the public and cause them to be removed at the contractor's cost.

**45. PAYMENTS :**

a) All bills shall be prepared by the Contractor in the form prescribed by the Bank / Consultant, (format enclosed). Normally one interim bill shall be prepared each month subject to minimum value for interim certificate as stated in these documents. The interim bill

in proper forms must be duly accompanied by detailed measurements, duly endorsed by the Site Engineer / PMC in support of quantities of work done and must show deduction for all previous payments, retention money, etc. Advance / ad-hoc payments for work will not be normally made. However, ad-hoc payments may be made at the discretion of Consultant / Bank in case of exigency.

The Consultant / Bank shall issue certificate after due scrutiny of the Contractor's bill stating the amount due to the Contractor from the Bank and the Contractor shall be entitled to payment thereof, by the Bank within the period of "honouring certificates" mentioned in these documents.

The amount stated in an interim certificate shall be the total value of work properly executed and approx. 75% of invoiced value of material brought, to site for permanent incorporation into the work up to the date of the bill less the amount to be retained by the Bank as the retention money and less installments previously paid under these conditions.

The materials to be considered for secured advance shall be nonperishable in nature and only include the value of the said materials and goods as and from such time as they are reasonably, properly and not prematurely brought to or placed adjacent to the work and then only if adequately protected against weather or other casualties and considered acceptable by the Consultants / Bank. An indemnity bond is to be submitted in an appropriate format approved by the Bank, whenever Secured Advance against materials are prayed for.

If the Bank has supplied any materials or goods to the Contractor, the cost of any such materials or goods will be progressively deducted from the amount due to Contractor in accordance with the quantities consumed in the work.

All the interim payments shall be regarded as payments by way of advance against the final payment only and not as payments for work actually done and completed and shall not preclude the requiring of bad unsound and imperfect or unskilled work to be removed and taken away and reconstructed or re-erected or be considered as an admission of the due performance of the contract or any part thereof in any respect or the accruing of any claim, nor shall, it conclude determine or affect in any way the powers of the Bank under these conditions or any of them as to the final settlement and adjustment of the accounts or otherwise or in any other way vary or affect the contract. The final bill shall be submitted by the Contractor to the Consultant within one month of the date of certificate of completion furnished by the Consultant and payment shall be made after the same is duly verified and certified by the Consultant.

b) FINAL PAYMENT :

The final bill shall be accompanied by a certificate of completion form the Consultant along with all other documents required to be submitted by the Contractor under these conditions. Payment of final bill shall be made after deduction of Retention Money as specified in these conditions which sum shall be refunded in the manner stated in these conditions. The acceptance of payment of the final bill by the Contractor would indicate that he would have no further claim in respect of the work executed.

**46. VARIATION / DEVIATION:**

The Contractor may when authorized and shall, when directed in writing by the Consultant / Bank, add and or omit or vary the work shown in the drawings or described in the specification or included in the priced schedule of quantities. The Contractor on his own accord shall make no addition, omission or variation without such authorization from Bank. A verbal authority or direction by the Consultant / Bank if confirmed by the Contractor in writing within 7 days shall be deemed to have been given in writing.



The price of all such additional / non-tendered items will be worked out on the basis of rates quoted for similar items in the contract wherever existing or an engineering rate analysis based on prevalent fair price of labour materials at site of work including wastage and other components as required plus 15% for overhead and profit etc. works contract sales Tax at prevailing rate will be payable extra over the stipulated OH / project percentage. The tender rates shall hold good for any increase or decrease in tender quantities.

No claim for an extra shall be allowed unless it has been executed by the authorization of Bank / Consultant. No variation shall vitiate the contract.

**47. SUBSTITUTION:**

Should the Contractor desire to substitute any materials and workmanship he / they must obtain the approval of the Bank / Consultant in writing for any such substitution well in advance. For materials designated in this specification by such term as "Equal" or "other approved", etc. Specific approval of the Bank / Consultant shall be obtained in writing prior to execution.

**48. PREPARATION OF BUILDING WORK FOR OCCUPATION AND SUBSEQUENTLY USE ON COMPLETION:**

The whole of the work will be thoroughly inspected by the Contractor and deficiencies / defects put right, all windows and doors cleaned including cleaning and oiling, if necessary of all hardware. All floors, staircases and every part of the building both inside & outside shall be left neat and clean as to ensure immediate occupation to the satisfaction of the Bank.

On completion of above, the contractor shall inform the Bank that he has completed the work and it is ready for inspection.

**49. CLEARING SITE ON COMPLETION:**

On completion of the work the Contractor shall clear away and remove from the site all constructional plant, surplus materials, rubbish and temporary work of every kind and leave the whole of the site and the work clean and in workman like condition to the satisfaction of the Bank / Consultant.

**50. DEFECTS AFTER COMPLETION:**

The Contractor shall make good from time to time at his own cost and to the satisfaction of the Bank / Consultant all defects, shrinkage, settlements or other faults which may appear within 12 (twelve) months after completion of the work and considered as the "defect liability period". In default the Bank may employ and pay other persons to amend and make good such damages, losses and expenses consequent thereon or incidental there to shall be made good and borne by the Contractor and such damages, loss and expenses shall be recoverable from him by the Bank or may be deducted by the Bank, in lieu of such amending and making good by the Contractor deduct from any money due to the Contractor a sum equivalent to the cost of amending such work and in the event of the amount retained being insufficient recover the balance from the Contractor from the amount retained under these conditions together with any expenses the Bank may have incurred in connection therewith.

**51. GUARANTEE FOR SPECIALIZED WORKS:**

Wherever provision for submission of a guarantee has been advised, the same shall be submitted from the specialized agency along with a counter guarantee by the main contractor engaged for the work. The guarantee shall be furnished on a non-judicial stamp paper of appropriate value. If the contractor is required to submit guarantee / guarantees for any item / items for a period of more than 12 months, the guarantee/guarantees in case of those items shall remain valid even after expiry of the defect liability period of 12 months as stipulated in the contract.

**52. CONCEALED WORK:**

The Contractor shall give due notice to the Bank / Consultant whenever any work is to be buried in the earth, concrete or in the bodies of walls or otherwise become inaccessible later on, in order that the work may be inspected and correct dimensions taken before such burial. In default whereof, the same shall, at the option of the Bank / Consultant, be either opened up for measurements at the Contractor's expense or no payments may be made for such materials. Should any differences or dispute arise after execution of any work as to measurements etc. or other matters which cannot be conveniently tested or checked the records of the Bank / Consultant shall be accepted as correct and binding on the Contractor.

- **Treasure Trove:** Any treasure trove, coin or object antique which may be found on the site shall be the property of SBI and shall be handed over to the Bank immediately.

**53. ESCALATION:**

The rates quoted shall be firm throughout the tenure of the contract (including extension of time, if any granted) and will not be subject to any fluctuation due to increase in cost of materials, labour, sales tax, octroi etc. unless specifically provided for this document.

**54. IDLE LABOUR:**

Whatever the reasons may be, no claim for idle labour, additional establishment cost, hire and labour charges of tools and plants would be entertained under any circumstances.

**55. SUSPENSION:**

If the Contractor, except on account of any legal restraint upon the Bank preventing the continuance of the work or in the opinion of the Bank shall neglect or fail to proceed with the due diligence in the performance of his part of the contract or if he shall more than once make default, the Bank shall have the power to give notice in writing to the contractor requiring the work be proceeded within a reasonable manner and with reasonable dispatch, such notice purport to be a notice under this Clause.

After such notice shall have been given, the Contractor shall not be at liberty to remove from site of the work or from any ground contiguous thereto, any plant or materials to subsist from the date of such notice being given until the notice shall have been complied with. If the Contractor shall fail for 15 days after such notice has been given to proceed with the work as therein prescribed, the Bank may proceed as provided in **Clause 56** (Termination of Contract by the Bank).

**56. TERMINATION OF CONTRACT BY BANK:**

If the Contractor being a Bank go into liquidation whether voluntary or compulsory or being a firm shall be dissolved or being an individual shall be adjudicated insolvent or shall make an assignment or a compensation for the benefit of the greater part, in number of amount of his creditors or shall enter into a Deed or arrangement with his creditors, or if the Official Assignee in insolvency, or the Receiver of the Contractor in insolvency, shall repudiate the contract or if a Receiver of the Contractor's firm appointed by the court shall be unable, within fourteen days after notice to him requiring him to do so, to show to the reasonable satisfaction of the bank that he is able to carry out and fulfill the contract and if so required by the Bank to give reasonable security there for, or if the Contractor shall suffer execution to be issued, or shall suffer any payment under this contract to be attached by or on behalf of and of the creditors of the contractor or shall assign, charge or encumber this contract or any payments due or which may become due to the Contractor, thereunder, or shall neglect or fail to observe and perform all or any of the acts matters of things by this contract, to be observed and performed by the Contractor within three clear days after the notice shall have been given to the contractor in manner hereinafter mentioned requiring the Contractor to observe or perform the same or shall use improper materials or workmanship in carrying on the work, or shall in the opinion of the Bank not exercise such due diligence and made such due progress as would enable the work to be completed within due time agreed upon and shall fail to proceed to the satisfaction of the Bank after three clear days' notice requiring the contractor to do so shall have been given to the contractor as hereinafter mentioned, or shall abandon the contract, then and in any of the said cases, the Bank may notwithstanding any previous waiver determine the contract by a notice in

writing to the effect as hereinafter mentioned, but without thereby affecting the powers of the Bank of the obligations and liabilities of the contract the whole of which shall continue in force as fully as if the contract had not been so determined and as if the work subsequently executed had been executed by or on behalf of the contractor (without thereby creating any trust in favour of the contractor). Further the Bank or his agent or servants may enter upon and take possession of the work and all plants, tools, scaffolding, sheds, machinery, steam and other power, utensils and materials being lying upon premises or the adjoining lands or road and sell the same as his own property or may employ the same by means of his own servants and workmen in carrying on and completing the work or by employing any other contractors or other person to complete, and the contractor shall not in any way interrupt or do any act, matter or thing to prevent or hinder such other contractors or other persons or person employed from completing and finishing or using the materials and plants for the work. When the work shall be completed or as soon as thereafter as conveniently may be, the Bank shall give notice in writing to the contractor to remove his surplus materials and plants and should the contractor fail to do so within a period of 14 days after receipt by him of the said notice, the Bank may sell the same by Public Auction and shall give credit to the contractor for the amount so realized. Any expenses or losses by the Bank in getting the work carried out by other contractors shall be adjusted against the amount payable to the contractor by way of selling his tools and plants or due on account of work carried out by the contractor prior to engaging other contractors or against the Security Deposit.

## 57. ARBITRATION

- i) Except where otherwise provided in the contract all questions and disputes relating 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 amount s 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 contract or raise any dispute, the contractor shall forthwith give notice in writing of his claim, or dispute to the Assistant General manager (Premises & Estate) S.B.I. LHO, Kolkata 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 Bank 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 Asst. General Manager (Premises & Estate) 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 Asst. General Manager (Premises & Estate) in writing in the manner and within the time aforesaid.
- ii) The Asst. General Manager (Premises & Estate) shall give his decision in writing on the claims notified by the contractor. The contractor may within 30 days of the receipt of the decision of The Asst. General Manager (Premises & Estate) submit his claims to the conciliating authority namely the Circle Development Officer, S.B.I. L.H.O., Kolkata for conciliation along with all details and copies of correspondence exchanged between him and The Asst. General Manager (Premises & Estate).

- iii) 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 Chief General Manager of the Bank for appointment of an arbitrator to adjudicate the notified claims failing which the claims of the contractor shall be deemed to have been considered absolutely barred and waived.
- iv) 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 Bank shall be referred for adjudication through arbitration by the Sole Arbitrator appointed by the Chief General Manager. It will also be no objection to any such appointment that the Arbitrator so appointed is a Bank Officer and that he had to deal with the matters to which the Contractor relates in the course of his duties as Bank 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 Chief General Manager. Such person shall be entitled to proceed with the reference from the stage at which it was left 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 statutory modification or reenactment thereof and the rules made thereunder.

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 Bank 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 arbitrator 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.

**Bill Submission Format:** The bill shall be as per tender specification as detailed below along with Detail Measurement Sheet. Bill will not be accepted if detail calculation sheet of the quantity executed at site is not being attached. If required then the contractor may be ask to submit the Manufacturing certificate in due course of bill checking period

SN	Description	Unit	Tender Rate	Tender quantity	Actual quantity (L/B/D)	Tender amount	Actual amount

### Declaration

I/We hereby declare that I/We have read the above terms and conditions /instructions carefully and fully understood and will abide by the same.

Signature of the vendor with seal

Place :

Date:

### 3. Quantities & SoR:

- All rates quoted in the schedule of quantities and rates and as accepted shall remain firm during the contractual period including extension if any and shall not be subjected to any escalation for a **variation limit of +20% of the Total Value of the Work as per Work Order**. They shall include for any overtime required to complete the Work according to programme and on schedule and completely to the Company's satisfaction.
- The Contract price includes rates for all items enumerated as per SoR, all wastage, all transportation costs, all costs relating to duties, royalties, Cess, taxes and other charges, all costs relating to operation and maintenance of construction equipment and also all services as applicable for execution of the work at your place except Service Tax, Education Cess and Worker's Welfare Cess.

The rates shall be deemed to include all direct costs, Land for Contractor's Workshop / Labour Camp and indirect cost such as those relating to access roads, establishment expenses etc

### Cost of Non Tendered Item

- In case any additional, altered, substituted or any new item of work includes subsequently as per site condition and requirement for which no rate is specified in the Contract, rate for such item will be determined by the Company from the rate for similar or near similar item of work in the Contract and shall be mutually discussed and agreed. In case any similar or near similar work does not exist in the Contract, the rate shall be decided by the Company based on the principle of actual cost of materials, wastage, taxes, transportation, equipment, running cost, labour, supervision, overheads etc towards actual direct cost plus 12.50% (Twelve and half percent) markup thereon.
- The intent of the Specifications and Schedule of Quantities is to have items finished and complete in all respects, unless specially stated otherwise in the Schedule. This shall be understood whether or not it is specifically mentioned in the description of the item.
- The schedule of quantities as given in the SoR is indicative only and may vary up or down as per actual requirement of site conditions for which item rate shall remain unchanged.
- The Schedule of Quantities issued by the Company with the tender documents shall be deemed to be approximate and no liability shall attach to them for inaccuracies or errors therein.
- **Schedule of Completion :**

Time is the essence of this Contract. The Contractor will have to commence the work at site within 7 days from the date of LOI and complete the entire work satisfactorily within **21 days** as per mutually agreed schedule. In case the contractor fails to mobilise the resources to site for commencing the work and complete the works as per mutually agreed time line for each phase; it is assumed that the contractor is not interested in executing the work and hence the said contract stands cancelled automatically. In such case, the Company is at the liberty to off load the work to other suitable agencies at your cost and risk.

#### **4. Liquidated Damage For Delay:**

In case of any delay in completion of work beyond the above schedule, LD @ ½ % (half percent) of the total contract value of the work for every week or part thereof for the first 4 weeks of delay and thereafter 1% (one percent) total contract value for every week, subject to a maximum of 5% (five percent) of the total Contract value on uninterrupted working condition.

#### **5. Obligations of the Bank**

##### **5.1 Electricity & Water**

Branch will provide electricity/water at the Site to Contractor for construction work at a single point (within 500 metres from place of work) free of cost. Necessary distribution shall be done by Contractor at their own cost. The location to be mutually agreed.

#### **3. Statutory and other Obligations:**

The Contractor shall and ensure that he and his sub-Contractor and nominated Contractor do strictly comply with all applicable statutory laws and orders of competent authorities and court and will specifically comply with the followings :

Labour Rules etc.

In respect of all labourers directly or indirectly employed in the works, the Contractor shall comply with all legislation and rules of State and/or Central Government or other local authority governing the protection of health, sanitary arrangements, wages, welfare and safety applicable for labour employed. The minimum Wages Act, 1948, Workmen's Compensation Act, 1923, Contract Labour (Regulation and Abolition) Act 1970 and other obligations of applicable statutes with regard to fair wages, welfare amenities and safety measures. The Contractor shall furnish to the Company necessary license under the Contract Labour (Regulation and Abolition) Act, 1970. The Contractor shall be solely liable for any default or non-compliance of the same.

Reporting of Accidents to the Authorities

The Contractor shall be responsible for the safety of all employees and/or workmen employed or engaged by him including those of the Company and the sub-Contractor/nominated Contractor on and in connection with the Works and shall report to the Company and other local authorities concerned all cases of serious accident howsoever caused and wherever occurring and render immediately all possible help to the victims of the accidents.

Accident or Injury to Workmen

The Contractor shall be solely liable for any accident or injury that may happen to any of his personnel engaged in connection with the construction, erection & commissioning work according to his Contract. HIL shall not be liable for, or in respect of, any damage or compensation payable at all in respect of, or in consequence of, any accident or injury to any personnel in the employment of the Contractor and the Contractor shall indemnify and keep indemnified HIL against all such claims, damages, compensations and proceedings

### **Unsatisfactory Work**

No work will be paid for unless found satisfactory and carried out strictly in accordance with the Specifications by the Company and certified by the Engineer to such effect. Should, through inadvertence, bad work be certified, the Engineer shall be competent to strike the same out of the account and recover the value at any time prior to or at the time of granting the final certificate by deduction from the final payment or otherwise.

Any work, executed not according to Specifications or with imperfect or unskilled workmanship shall be removed or reconstructed by the Contractor at his cost on receipt of instructions in writing from the Company's Engineer. Should the Contractor fail to take action within 7 days of receipt of such notice, the Engineer shall be entitled to remove or reconstruct such work at the risk and cost of the Contractor, and the Company shall recover the amount from any amount of money due to the Contractor/security deposit on account of such work.

Should the Engineer consider that the work although not executed in strict accordance with the Specifications may be allowed to stand, he may at his discretion certify payment against such work at such reduced rates as he may consider reasonable.

Examination of any covered work may on occasion be required by the Engineer and such work shall be uncovered by the Contractor. The Company shall not pay for covering such work again unless it is found that the work uncovered has been executed fully to the Company's satisfaction

### **26. Defective Liability / Warranty:**

The Contractor warrants the quality of civil construction work under the scope of work for a period of **12 months from the date of virtual completion**, against defective material, poor workmanship and design. In case the civil construction work shows any defect arising out of defective material, and/or poor workmanship and/or design (if design is within the scope of the Contractor) during the warranty period, the Contractor shall take immediate step for rectification within 7 days of observance of such defect, free of all cost against written communication from the Company/Engineer failing which the Company reserves the right to carry out rectification at the risks and cost of the Contractor and recover the expenses from the Contractor's running bills and/or from retention money and/or other means, as deemed fit. However, the above warranty will not be applicable for any normal wear and tear in roadwork if constructed by the Contractor under the Scope of Works.

Should any defective work have been done by any Sub-contractor or Nominated Sub-contractor, the Contractor shall be liable to make good the same in the same manner as if the work and materials has been done and supplied by the Contractor itself. The Contractor shall remain liable under the provisions of this clause notwithstanding the payment of any intermediate bills or settlement of the final bill.

### SAFETY MEASURES AT SITE

1. All personnel at site should be provided with Helmets and Safety Boots with some Identification Mark. Visitors also should be provided with Helmets. It should be ensured that these are used properly.
2. First Aid Box should be kept at site with all requisite materials.
3. No one should be allowed to inspect / work at a height without Safety Belt.
4. Suitable scaffolds should be provided for workmen for all Works that cannot safely be done from the ground, or from solid construction except such short period Work as can be done safely from ladders. When a ladder is used an extra Mazdoor shall be engaged for holding the ladder and if the ladder is used for carrying materials as well as suitable footholds and handholds shall be provided on the ladder and the ladder shall be given an inclination not steeper than  $\frac{1}{4}$  to 1 ( $\frac{1}{4}$  horizontal and 1 vertical).
5. Scaffolding or staging more than 3.5 meters above the ground or floors, swung or suspended from an overhead support or erected with stationary support shall have a guard rail properly attached, bolted, braced and otherwise secured at least 1 Meter high above the floor or platform of such scaffolding or staging and extending along the entire length of the outside and ends thereof with only such openings as may be necessary for the delivery of materials. Such scaffolding or staging shall be so fastened as to prevent it from swaying from the building or structure.
6. Working platforms, Gangways, and Stairways should be so constructed that they do not sag unduly or unequally, and if the height of the platform or the Gangway or the Stairway is more than 3-5 Meters above ground level or floor level they should be closely boarded, should have adequate width and should be suitably fenced, as described.
7. 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 1 metre.
8. Safe means of access shall be provided to all working platforms and other working places. Every ladder shall be securely fixed. No portable single ladder shall be over 9 Meters in length while the width between side rails in rung ladder shall in no case be less than 30cms for ladder up to and including Meters in length. For longer ladders this width should be increased at least 6mm for each additional 30 cm. Uniform step spacing shall not exceed 30 cm.
9. Adequate precautions shall be taken to prevent danger from electrical equipment. For electrical on line works gloves, rubber mats, and rubber shoes shall be used.
10. All trenches 1.2 Meters or more in depth shall at all times be supplied with at least one ladder for each 30 Meters length or fraction thereof. Ladder shall be extended from bottom of the trench to at least 1 Meter above the surface of the ground. The sides of the trenches, which are 1.5 Meters or more in depth shall be stepped back to give suitable slope, or securely held by timber bracing, so as to avoid the danger of sides collapsing. The excavated materials shall not be placed within 1.5 Meters of the edge of the trench or half of the depth of the trench whichever is more cuttings shall be done from top to bottom. Under no circumstances underng or under cutting shall be done.
11. Before any demolition work is commenced and also during the process of the work :-
  - a) All roads and open areas adjacent to the Work Site shall either be closed or suitably protected;
  - b) No electrical cable or apparatus which is liable to be a source of danger over a cable or apparatus used by the operator shall remain electrically charged.



- c) All practical steps shall be taken to prevent danger to persons employed from risk of fire or explosion or flooding. No floor, roof or other part of the building shall be so over-loaded with debris or materials as to render it unsafe.
- d) All necessary personal safety equipment as considered adequate by the Site Engineer should be kept available for the use of the persons employed on the Site and maintained in a condition suitable for immediate use; and the Contractor should take adequate steps to ensure proper use of equipment by those concerned.
- e) Workers employed on mixing Asphaltic materials, cement and lime mortars shall be provided with protective footwear and protective goggles.
- f) Those engaged in white washing and mixing or stacking of cement bags or any materials which is injurious to the eyes shall be provided with protective goggles.
- g) Those engaged in welding works shall be provided with Welder's protective eye-shields.
- h) Stone breakers shall be provided with protective goggles and protective clothing and seated at sufficiently safe intervals.
- i) When workers are employed in sewers and manholes, which are in use, the Contractor shall ensure that the manhole covers are opened and are ventilated at least for an hour before the workers are allowed to get into the manholes and the manholes so opened shall be cordoned off with suitable railing and provided with warning signals and boards to prevent accident to the Public.
12. Use of hoisting machines and tackle including their attachments, anchorage and support shall conform to the following standard or conditions:
- a) These shall be of good mechanical construction, sound material and adequate strength and free from patent defect and shall be kept in good repairs and in good working order.
- b) Every rope used in hoisting or lowering materials or as a means of suspension shall be of durable quality and adequate strength, and free from patent defects.
- c) Every crane driver or hoisting appliance operator shall be properly qualified and no person under the age of 21 years should be in-charge of any hoisting machine including any scaffold, winch or give signals to the operator.
- d) In case of every hoisting machine and of every chain ring hook, shackle swivel and pulley block used in hoisting or lowering or as means of suspension the safe working load shall be ascertained by adequate means.
- e) Every hoisting machine and all gear referred to above shall be plainly marked with the safe working load. In case of hoisting machine having a variable safe working load, each safe working load of the conditions under which it is applicable shall be clearly indicated. No part of any machine or of any gear referred to above in this paragraph shall be loaded beyond the safe working load except for the purpose of testing.
- f) Motor, Gearing, Transmission, Electric wiring and other dangerous parts of hoisting appliances should be provided with efficient safeguards, hoisting appliances should be provided with such means as will reduce to the minimum the risk of accidental descent of the load, adequate precautions should be taken to reduce to the minimum the risk of any part of a suspended load becoming accidentally displaced.
- g) When workers are employed on electrical installation, which are already energized, insulating mats, wearing apparel such as gloves, sleeves, and boots as may be necessary should be provided. The workers should not wear any rings, watches and carry keys or other materials, which are good conductors of electricity.

All scaffolds, ladders and other safety devices, mentioned or described herein shall be maintained in safe condition and no scaffold, ladder or equipment shall be altered or removed while it is in use. Adequate washing facilities shall be provided at or near places of work.

Details of Insurance Policies

Type of Policies	Name of Insurance	Amount (Rs.)	Policy No.	Validity
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CAR Policy including  
3<sup>rd</sup> Party Liability

Workmen's Compensation

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Remarks :

1. This is only on-account payment and is not to be interpreted either as approval of work materials brought or affixed at site or for that matter approval of any sort
2. The quantum of work done and materials delivered at site have been certified by .....
3. Should you wish to audit such work, kindly contract the undersigned and oblige.

Architects

**PROFORMA OF HINDRANCE REGISTER**

Name of Work : \_\_\_\_\_ Date of state of work :

Name of Contractor : \_\_\_\_\_ Period of completion :

Agreement No. : \_\_\_\_\_ Date of completion :

Sl. No.	Nature of hindrance	Date of occurrence of hindrance	Date of which hindrance was removed	Period or hindrance	Signature SE/PE	Remarks
1	2	3	4	5	6	7

SE = Site Engineer

PE = Project Engineer

Place : \_\_\_\_\_

Date : \_\_\_\_\_

**PROFORMA OF REGISTER OF MATERIAL AT SITE ACCOUNT**

Name of Work : Name of Article :  
Name of Contractor : Estimated Requirement :  
Agreement No. : Issue Rate :

Sl. No.	Date of Receipt	Received from / issued to (with)	Receipt	Issue	Balance	Initials of Contractor	Initials of Bank's / Architect's Representative	Remarks

**PROFORMA FOR APPLICATION BY CONTRACTOR FOR EXTENSION OF TIME**

1.	Name of the Contractor			
2.	Name of the works as given in the Agreement			
3.	Agreement WO			
4.	Tender Amount			
5.	Date of Commencement of Work			
6.	Period allowed for completion as per agreement			
7.	Date of completion as per agreement			
8.	Period for which extension of time has been given			
		<u>Date</u>	<u>Month</u>	<u>Year</u>
	(a) 1st extension vide Bank's Letter No.			
	(b) 2nd extension vide Bank's Letter No.			
	(c) 3rd extension vide Bank's Letter No.			
9.	Reasons for which extensions have been previously given ( copies of the previous applications should be attached )			
10.	Period for which extension is applied for and the reasons thereof including hindrances time for extra work assigned , if any etc.			

Signature of Contractor

## TECHNICAL SPECIFICATION

### GENERAL AND TECHNICAL SPECIFICATIONS

1. These specifications are for the work to be done, items to be supplied and materials to be used in the works as shown and defined on the drawings and described here in all under the supervision and to the satisfaction of the Consultant/Bank.
2. The workmanship is to the best available and of a high standard, use must be made of Specialist tradesman in all aspects of the work and allowance must be made in the rates for doing so:
3. The materials and items to be provided by the contractor shall be the best of their respective kinds and as approved by the consultants/Bank in accordance with the samples which may be submitted for approval and generally in accordance with the specifications.
4. Samples of all materials including those specified by name of the manufacturer or the brands, trades name or by the reference to catalogue Nos. are to be submitted to the Consultant/Bank for their approval before the contractor either orders or delivers in the bulk to site. Samples together with their packings are to be provided by the contractor free of any charge and should any materials be rejected, the same will be removed from the site at the expense of the contractor.
5. The contractor is also required to submit specimen finishes of all colours, fabrics, polish shades etc., for approval of the consultant/Bank before proceeding with such works.
6. Should it be necessary to prepare shop drawing, the contractor at his own expense prepare and submit at least four sets of such drawings to Consultant/Bank for approval.
7. The contractor shall produce all invoices, vouchers or receipts account of all purchases done by him for materials if called upon to do so either by Consultants or the Bank.
8. The contractor should verify all measurements given in the drawings at the site before commencing the work. Any difference should be clarified with the consultant before commencing the work.
9. Partition line out shall be done at the site before starting the work and got approved from the Consultants.
10. The contractor shall submit Bar Chart (CPM method) for the complete work within one week of letter of acceptance of tender and get the same approved from Consultant/Bank in advance to co-ordinate the work with other agencies.
11. In order to complete the work in time, the contractor may have to work in more than one shift and beyond office hours. He will do so without any extra charges and without causing any disturbance/inconvenience to the neighborhood.
12. The contractor shall make necessary security arrangements at the site for the safety of his tools, materials and equipment etc. his own cost.
13. The contractor shall quote his rate including the cost of materials as specified, corresponding wastages, labour, sales tax or any other taxes & duties, octroi, transportation to work site etc.

The rates are firm and no escalation on any account shall be allowed on accepted rates.

14. The contractor shall be responsible for providing and maintaining temporary coverage required for the protection of dressed, finished or semi-finished works if left unprotected. He is also to clean out all shavings, cut ends and other wastages from all parts of the work at his expenses.

15. INSPECTION AND TESTING:

The consultant/Bank shall be entitled at all times at the risk of contractor to inspect and/or test by itself or through an independent agency appointed by the Employer to Inspect, and/or test all the materials, components, and items of work at the expenses of the contractor. All such test shall be done as per ISI guidelines and as directed by Consultant/Bank.

## **AIR COOLED SPLIT TYPE AIR CONDITIONERS**

### **1.0 GENERAL:**

1. Air cooled split type air conditioner shall consist of units.
  - Evaporator unit (indoor unit)
  - Condensing Unit (Outdoor Unit)
- ❖ The evaporator unit comprises evaporator coil, evaporator fan assembly installed together in a single sheet metal casing and with inter-connecting refrigerant piping, refrigerant controls, safety devices, etc., The unit shall be complete with electronic center & control pad incorporating the thermostat & speed control.
- ❖ The condensing unit comprise compressor-motor unit, condenser coil, condenser fan, fan control, casing supporting stand etc,
- ❖ Both the evaporator unit and the condensing units shall be factory manufactured.
- ❖ The Panel for casing shall be machine pressed and folded. The entire casing shall be factory manufactured, it shall be of robust construction and shall present a neat appearance. The tenderers shall also bring out in their tenders clearly the manufacturing techniques, finishes employed to meet the service conditions involved, etc.,
- ❖ The units supplied with control panel incorporating switch fuse units, contactors, overload relays, single phase preventors, push buttons, etc., compressor and condenser fans.
- ❖ It is incumbent upon the tenderer to ensure that the model selected operates stabilizer free for the project location. They should obtain the electrical supply related data of the project location first hand. In case of any major deviation in supply, it should be brought into notice.

### **2.0 EVAPORATOR UNIT.**

- a) All the components of the evaporator units shall be housed in a sturdy MS/GSS casing. In the case of MS casing, it should be dully painted/treated to resist corrosion, rust and other deleterious effects.
- b) Removable panels shall be provided to finish access to the cooling coil, fan motor compartments filter to facilitate servicing and maintenance work.
- c) The fan section shall consist of fan, fan casing (scroll) shaft and driven motor.
- d) The fan shall be centrifugal type and impeller shall incorporate forward curved blades. the fan shaft and impeller shall be both statically and dynamically balanced.
- e) The fan scroll shall be designed and shaped to optimize recovery static pressure and maximize efficiency at rated delivery and static pressure
- f) The fan shall be direct driven by a TEFC squirrel cage induction motor. the tenderers shall confirm electrical characteristics of the motor as required in technical data.
- g) The fan motor drive etc., shall all be design and mounted so as to minimize noise and vibration.

h) The cooling coil shall be of copper tubes and aluminum fins, the concentration shall be not less than 3/cm (8\in).

### 3.0 CONDENSING UNIT :

The unit shall be factory manufactured and shall be suitable for out door installation. It shall comprise compressor unit, condenser coil, fan fan motor, drive casing supporting stands etc,.

The compressor unit shall consist of high EER Rotay BLDC with compressor and motor housed in a common shell, it shall be either hermetic or semi-hermetic type. in case the compressor motor is semi-hermetic type, the end plate shall be bolted to the shell.

The compressor shall be suitable for use with R-32/R-410A or other eco-friendly refrigerant.

The tenderers are required to narrate in detail all protective devices, controls and such other features provided for the compressor motor units offered by them, like high temperature protection and over current protection, high and low pressure cut-outs. low oil pressure protection etc,.

The condensing unit shall be installed on a pedestal on the terrace/wall of the building as shown in the drawing. the fan shall be propeller type direct-driven by an electrical motor. The unit shall be mounted in such a manner as to minimize transmission of vibration to the structure using vibration isolation pads, if necessary to secure satisfactory results.

The casing and structure for the condensing unit shall be of robust construction. The panels shall be of heavy gauge hot dip galvanized steel and they shall be machine-pressed and folded. All joints shall be folded joints. The supporting structure shall use only hot dip galvanized sections, i.e. angels channels etc,.

The tenderers shall bring out in any case clearly, (and in detail) the details of construction of the equipment offered by them, highlighting in particular, the thickness and kind of materials used, manufacturing techniques employed, finish provided for whether protection etc,.

Air cooled condensing unit shall incorporate necessary number of propeller fans of adequate size to obtain the required air flow rate under operating conditions. the fan shall be balanced both statically and dynamically. The fan motor shall be of TEFC split phase squirrel cage/BLDC motor.

The fan motor sets shall be complete with protecting guards.

The condenser coil shall be made of copper tubes and aluminum fans. the coils shall be sized so as to optimize performance with respect to air flow rate, pressure drop, condensing temperature, power consumption etc., thus the values furnished for the parameters of the coil in section III, schedule of equipment shall be regarded as suggested values rather than specified values.

The coils shall be pressure tested for values not less than those indicated below. However the actual pressure will depend upon the type of refrigerant used and the manufacturer guidelines for the same.

Factory test - kg/sqcm (psi) : 30 (440)

Field test - kg/sqcm (psi) : 25 (350)

The coils shall be so positioned with respect to the floor level that, dust pick-up by entering air is minimized.

As noted in clause the condensing units have to be installed out door on suitable pedestals or any other appropriate supporting arrangements. Masonary work, if any required for supporting units shall be provided by the owner, but the tenders shall furnish all necessary information including drawings. further any supports made of MS structural sections if required should be designed, supplied and installed by the air



conditioning contractor himself. He shall show the details of such supports in appropriate drawings and shall obtain the approval of the owners/consultants before providing them. The charges for such works shall be included in the prices quoted by the tenderers : in any case, no extra sum will be payable on that account.

## **2. VRF UNITS:**

VRF units are to be incorporated with Twin rotary / scroll DC inverter compressor. Energy efficiency and quiet operation are very important criteria for the selection of the VRF units. Refrigerant shall be R407c / R410A. The total operation times of all the compressors shall be monitored by a microcomputer, so that there is no unbalance for the operation times of all compressors in the same refrigerant system. Compressors with a shorter operation time are operated with preference. Floor space occupied shall be the lowest possible.

Units shall have microprocessor control panel for ease of operation, self diagnostics, efficient and precision running. Each indoor unit in VRF system shall have its own microprocessor based controller. Each indoor unit shall have corded or cordless remote to operate the unit and set the required room temperature. Unit shall have auto restart facility in case of power failure to avoid operator interference. The unit shall be compatible for operating from remote location through one point centralized controllers.

If one of the three compressors in an outdoor unit malfunctions, one of the other compressors shall take over emergency operation. If one outdoor unit malfunctions in a system, other outdoor units provide emergency operation until repair is effected.

Condenser coil aluminum fins shall have PE treatment for longer life by improving the resistance to corrosion.

Shift and install the out-door units and indoor units as per the manufacturer's instructions and approved drawings. Outdoor units and indoor units shall be leveled before connecting the copper piping.

## **3. COPPER REFRIGERANT PIPING:**

Soft copper piping of 20 SWG shall be used for VRF indoor unit connections. All other copper piping shall be hard drawn 16 G shall be used. Copper piping shall be of VRF grade with 100% eddy current testing. Copper piping shall be supported or clamped at every 1.5 mt distance. Only imported ref-net joints imported from the equipment supplier should be used for VRF piping. All other pipe fittings shall be of approved make drawn with 16 G copper piping. Pressure testing of copper piping should be carried out floor wise as per site condition. Final pressure testing should be carried out after completing the entire piping and after connecting to the indoor units and outdoor units. Copper piping shall be tested at 400 PSI for 24 hours. Valves for the maintenance shall be provided at the required places. Proper supports on the terrace shall be provided for copper refrigerant piping at 1.5 mt. interval. UV layer protection finish shall be given for the refrigerant piping which is exposed to the sun light. Refrigerant piping on the terrace shall be covered at bottom and top with powder coated cable tray to avoid physical damage.

## **4. INSULATION TO REFRIGERANT PIPING:**

19 mm thick nitrile rubber tube insulation shall be used for VRF copper piping. Both the copper refrigerant piping shall be insulated. Insulation shall be finished properly and neatly at all fittings and joints. PVC sleeve shall be provided at all supports and shall be tied firmly with wire tie. Insulation shall not be damaged at supports. PVC sleeves shall be provided over the insulation when passing through the walls or slabs. All joints shall be sealed with self adhesive tape. UV layer protection finish shall be given for the refrigerant piping exposed to the sun light.

## **5. COMMUNICATION CABLE AND CONTROL CABLING:**

Communication cable and control cabling: Communication cable and control cabling shall be laid in 20 mm dia FRLS PVC conduits. PVC conduit should be clamped neatly. Cable terminations and dressing shall be done properly and neatly.

## 6. DRAIN PIPING:

2.5 mm thick Blue PVC drain piping shall be used for the drain piping. Proper care shall be taken to lay the drain piping with sufficient slope and should be clamped or supported at 1.5 m interval. All drain pipe joints shall be done with adhesive. Drain piping should be tested for leaks before commissioning. After testing for leaks, drain pipe shall be insulated with 9 mm thick nitrile rubber tube insulation. Insulation shall be finished with self adhesive tape. Due slope of 1/100 or as per OEM guidelines must be maintained so as to avoid water logging or leakage.

1. The Gauges, Joints and Bracings for sheet metal duct work, shall further conform with the provisions as shown on the drawings.
  2. Ducts larger than 450mm shall be cross broken, duct sections upto 1200 mm length may be used, with bracing angle omitted.
- ❖ Changes in section duct of work shall be affected by tapering the ducts with as long taper as possible. All branches shall be taken off at not more than 45 deg. angle from the axis of the main duct, unless otherwise approved by the engineer-in-charge.
  - ❖ All ducts shall be supported from the structural/RCC slab by means of MS rods of 9mm (3/8") dia, with MS angle at the bottom as per requirements of engineer-in-charge.

### INSTALLATION :

- During the construction, the contractor temporarily close duct openings with sheet metal covers, to prevent debris entering to the ducts and to maintain the opening, straight and square, as per the direction of engineer-in-charge.
- Great care should be taken to ensure that, the duct work does not extend outside and beyond the height limits as noted in the drawings.
- All duct work shall be of high quality approved galvanized sheet steel, guaranteed not to crack or peel on bending or fabrication of ducts and all joints should be tight and smooth.
- All air turns of 45 Degrees or more shall include curved metal blades or vanes arranged so as to permit the air to make abrupt turns, without an appreciable turbulence. Turning vanes shall be securely fastened to prevent noise or vibration. All ducts shall be fabricated and installed in accordance with modern design practice. The sheet metal gauges and fabrications procedures as given in IS specifications, shall be considered as an integral part of these specifications.
- The duct work shall be varied in shape and position, to fit actual conditions in the building. All changes shall be in accordance with accepted air-cooling duct design subject to the approval of the engineer-in-charge. The contractor shall also verify all measurements in the building and shall notify the engineer-in-charge of any difficulty in carrying out his work before fabrication.
- Sponge rubber or approved equal gaskets, shall be installed between duct flanges as well as between all connections of sheet metal ducts to walls, floor columns, heater casings and filter casing. Sheet metal connections shall be made to wall and floors, by means of galvanized steel angles, anchored to the building structure with anchor bolts and with the sheet bolted to the angles. Sheet metal connections shall be as shown in the false ceiling/boxing or supports grouted in the wall.
- Flanges and supports are to be black, mild steel and are to be primer coated on all surfaces, before erection and painted with aluminum thereafter. Accessories such as damper blades and access panels, are to be of materials of appropriate thickness & the finish, similar to the adjacent ducting as specified.

- Joints, seems, sleeves, splitters, branches, take off and supports are to be as per duct details specified or as decided by the engineer-in-charge.
- Joints requiring bolting or riveting, may be fixed by hexagonal nuts and bolts, stove bolts and buck bolts, rivets or closed center top rivets or spot welding, self tapping screws must not be used. All fixing must have a permanently non-corrosive finish such as cadmium
- plating or galvanizing, whichever is appropriate. Spot welds and bronze welds are to be coated on all surfaces with zin.
- The flexible joints are to be fitted to the suction and delivery of all fans. The material is to be normally double heavy canvas or as directed by the engineer-in-charge. On all circular spigots the flexible materials are to be screwed or clipboard with adjustable screws or toggle fittings. For rectangular ducts flat or bolted to making flange with backing flat.
- The flexible joints are to be not less than 75mm and not more than 250mm between faces.
- The duct work should be carried out in a manner and at such a time as not to hinder or delay the work of the other agencies especially the false ceiling contractors.
- At the junction of such branch duct with main duct and split of main duct, volume dampers shall be of an approved type, lever operated and complete with locking devices, that will permit the damper to be adjusted and locked in any positions.
- The dampers shall be of splitter, butterfly or louver type. the damper blade shall be not less than 1.25mm (18 gauge) reinforced with 25mm angles, 3mm thick along any unsupported side longer than 250mm angles, shall not interfere with the operation of damper, nor cause any turbulence.
- Automatic and manual volume apposed blade diffusers, shall be complete with frames and bronze bearings as per drawings. Dampers and frames shall be constructed of 1.5mm steel & Blades shall not be over 225mm wide.

#### *ACCESS PANEL*

A hinged and gasketed access panel shall be provided on the duct work before each control device that may be located inside the duct work.

#### *MISCELLANEOUS :*

- i. All ducts above 450mm are to be cross broken, to provide rigidity to the ducts.
- ii. All duct work joints are to be true right angle or approaching with all sharp edges removed.
- iii. Sponge rubber gaskets also should be provided behind the flange of all grilles.
- iv. Each shoot from the duct, leading to a damper, shall be provided with an air deflector to divert the air into the diffuser through the shoot.
- v. Inspection doors measuring at least 450x 450mm are to be provided in each system, at an appropriate location, as directed by the engineer-in-charge.
- vi. Diverting vanes must be provided at the bends exceeding 600mm and at branches connected into the main duct, without neck.
- vii. Proper hangers and supports should be provided to hold the ducts rigidly, to keep them straight & to avoid vibrations. Additional supports are to be provided where required, for rigidity or directed by the engineer - in - charge.
- viii. The ducts should be supported by approved type supports at a distance not exceeding 2.4 meters.

ix. Sheet Metal connection pieces, partitions and plenums required, shall be constructed of 1.25mm (18 Gauge) sheet thoroughly stiffened with 25mm x 25mm angle iron braces and fitted with access doors.

Grilles/diffusers :

- ❖ The Supply air diffusers shall be fabricated from MS/AL sections . The grille shall have horizontal extruded section fixed louvers.
- ❖ The Diffusers shall have opposed blade dampers of MS/AL which shall be key operated from the grille face, wherever required.
- ❖ The damper blades shall be of 1.25mm ( 18 Gauge) Al/MS Black sheets and shaped to form air tight joints. The frame work for dampers shall be fabricated from 1.25mm (18 Gauge) Al/MS Black sheet. the grille frame shall be fabricated from extruded aluminum angle. Grilles longer than 450mm, Shall have intermediate supports for the horizontal louvers. the grilles shall generally be to the design of Tuttle & baley grilles and registers.

PAINTING

- ❖ All grilles and diffusers shall be powder coated in color as approved by the architects/consultants, before installation.
- ❖ All ducts immediately behind the grilles/diffusers, are to be given two coats of black paint in Matt finish.

TESTING :

- ❖ After completion, all duct system shall be tested for air leakage.
- ❖ The Entire air distribution system, shall be balanced to supply the air quantity as required in various areas and the final balance of air quantity through each outlet, shall be submitted to the engineer- in charge. for approval.

INSULATION

GENERAL :

Insulation material will be resin bonded fiber glass or expanded polystyrene of TF ( Treated for fire ) quality or rigid pre laminated with aluminum foil polyurethane foam or phenotherm rigid phenolic foam.

The thermal conductivity of thermal glass shall not exceed 0.034 kcal-m/hr Deg C or 0.27 BTU in/hr sq.ft Deg F at 32 Deg C (90 Deg F) mean temperature, and density shall not be less than 24kg/cu.m. for resin bonded fiber glass thermal conductivity shall not exceed 0.022 kcal-m/hr sq.m Deg C or 0.018 BTU-in/hr-sq.ft Deg F at 32 Deg c mean temperature, and density shall not less than 36 kg/cu.m (3 lb/cu.ft). For expanded polystyrene the thermal conductivity shall not exceed 0.025 kcal-m/hr.sq.m Deg C/m or 0.024 BTU-in/hr.sq.ft.-Deg C(90 Deg F) mean temperature and density shall not less than 24 kg/cu.m ( 1.5 ib/cu.fot ) for pre rigid prelaminated with aluminum foil polyurethane foam, the thermal conductivity shall not exceed 0.02 kcal m/hr sq.m Deg C or 0.16 BTU-/hr sq.ft. deg F at 32 Deg C ( 90 Deg F ) mean temperature and density shall not less than 36 kg/cu.m (2.26 lb/cu.foot). thickness of the insulation shall be as specified for the individual applications. Adhesive used for setting the insulation shall be non flammable, vapour proof adhesive.

ACOUSTIC LINING

The acoustic lining for ducts so identified and marked in the drawing and included in the schedule of quantities shall be provided with acoustic lining of thermal insulation.

INSTALLATION :

- a) The duct surface shall first be cleaned from inside.

- b) The insulation boards shall be wrapped in glass cloth of 7 mil thickness with end stitched.
- c) Then the Boards shall be fixed inside the duct.
- d) The insulation shall then be covered with 0.5mm perforated aluminum sheets.
- e) The sheet and the insulation shall be secured to the duct by means of cadmium plated bolts, nuts washers. The ends should be completely sealed off, so that, no insulation material is exposed.

#### DUCT THERMAL INSULATION. EXTERNAL

- ❖ Wherever supply air ducting exposed to atmosphere shall be insulated with 50mm thick thermocole. first external duct shall be cleaned with a wire brush to remove dirt and dust. Apply a thick coat of bituminous primer. when the primer is still tacky, apply the insulation material.
- ❖ Seal the joints using bitumen. Warp the insulation with 24 gauge GI chicken wire mesh around the insulation and two layers of smooth setting cement plaster each of 6mm thickness applied over length of wire mesh. Duct shall be painted with water proof paint of approved make.

#### ROOF INSULATION

- ❖ Exposed roof over the conditioned areas shall be insulated with 50mm thick expanded polystyrene. For under deck insulation in the conditioned areas, the insulation of TF Quality shall be used.
- ❖ Under deck insulation shall be done by fixing the thermocol slabs by wire and mesh method. raw plugs shall be fixed in the grid of 500mm x 500mm, tie wires and fix thermocol slab rigidly using 24G Plate washers through the GI Wires.

#### REFRIGERANT PIPING

- ❖ The specifications that follow cover the requirements of piping.
- ❖ Only copper piping/tubing of refrigeration quality shall be used. Soft copper tubing can be employed for sizes upto and including 22mm (7/8") OD and 9.5mm (3/8") OD shall have a minimum nominal thickness of 0.76mm (0.030") and 0.81mm (0.032") respectively.
- ❖ All piping / tubing shall be new fresh, clean and dry.
- ❖ Fittings like bends, tees, sockets, etc. shall be of copper or forged brass. Flare type fittings may used for copper tubing while hard drawn tubes upto and including 15mm size may be bent to from 90 Deg bends with throat radius being not less than 3 times the tube diameter. for bigger sizes, bends should be used as noted already.
- ❖ Valves for pipe sizes upto 15mm OD shall be all brass, hand wheel operated, Diaphragm packless type, globe or angle valves, for sizes over 15mm OD Valves shall be of bronze, globe or angle type, packed back sealed.
- ❖ Liquid line strainers shall be made of brass shall incorporate bronze screen and permanent management. Strainers shall be provided with shut valves on either side.
- ❖ Thermostatic expansion valve shall be complete with remote bulb and external equalizer and external super head adjustment. Solenoid valves shall have manual opening system to serve as by - pass in case of failure of solenoid valve. Liquid-moisture indicator shall be provided in the liquid line.
- ❖ Flare type joints may be used for copper tubing while for a hard-drawn pipe only brazed joints shall be used. For Small lines also such as equalizer lines, expansion valves connections, gauge connections, connecting pressure switches etc., Flared fittings and joints shall be used.

- ❖ Piping shall be insulated sufficient number of bends and turns to ensure sufficient flexibility and minimize vibration. Supports, Clamps, Saddles, hangers etc., of adequate strength should be provided as required to support the piping adequately and minimize vibration.
- ❖ Necessary isolating material like rubber, felt, spring, etc., should also be provided as an additional measure to limit transmission of noise and vibration.
- ❖ Refrigerant piping shall be carried out giving due consideration to the need to ensure oil return and avoid liquid slope-over into the compressor, Accordingly, the piping shall include necessary loops, traps, slopes, etc., to achieve these objectives.
- ❖ While installing the piping, adequate clearance between pipes should be provided for insulation is called for
- ❖ On completing the erection, the system shall be pressure tested with dry nitrogen or carbon de-oxide. The test pressure shall be as per ASME B31.3 for R-22.
- ❖ High Pressure side - kg /sqcm(psi) : 25 (365)
- ❖ Low Pressure side - kg /sqcm(psi) : 110 (150)
- ❖ The system shall hold the pressure for a minimum period of 24 hours without revealing leaks.
- ❖ After the leak test has been completed successfully, the pressure due to Nitrogen or Carbon-de-oxide in the system.
- ❖ The System shall then be dehydrated by drawing a vacuum. The vacuum achieved shall be at least as deep as 500 microns and shall be maintained for a period of at least 24 Hours after the vacuum pump has been shut off.

**INSULATION FOR REFRIGERANT PIPING:**

- ❖ All suction lines ( insulated both indoors & outdoors) and liquid lines laid outdoors shall be applied over a coat of bituminous primer applied on the pipe surface.

**CONDENSATE DRAIN PIPING:**

- ❖ PVC Pipes ( Medium) shall be used for condensate drain piping.
- ❖ Piping shall be supported suitably on walls/floor and all charges involved there to shall be applied in the prices quoted by the tenderers.
- ❖ While Installing the piping the contractor shall keep in mind the requirement that it should not foul with the structural or architectural features of the building. Further, all piping must be installed in a neat and workman - like - manner.
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**Contractor signature with Date & Stamp**

**LIST OF MATERIALS OF APPROVED MAKES/BRAND**

The contractor shall use materials in their works subject to inspection prior to dispatch, by Owner or his authorized representative of any materials, as deemed necessary in accordance with the following list. All materials not otherwise specified shall be in accordance with the latest Indian Standard Specification, where such exists and subject to prior approval of Owner/Architect. The contractor shall be bound to offer sample of materials, which are claimed to be conforming to IS Specifications, for testing at an approved Test Laboratory as and when directed by Owner/Architect.

Contractor shall purchase all materials from the makers or their authorized stockists only. Necessary documentary evidence must be produced to the Owner or their authorized representative on demand. **Contractor shall be bound to supply items of any make of the items as per the choice of the Owner/Architect.**

ITEM	ACCEPTABLE MAKES
<b>MACHINES</b>	
Air Cooled VRV/VRF Units	Daikin, Blue Star, Hitachi, Mitsubishi, LG, Carrier, Voltas
Split /Cassette AC Units	Daikin, Blue Star, Hitachi, Carrier, Mitsubishi, LG, Voltas, Toshiba, O'General
<b>VENTILATION/EXHAUST FAN</b>	
Propeller Fans	Alsthom
Inline Centrifugal Fans	Nicotra, Caryaire, Kanalfakt
<b>DUCTING &amp; ACCESORIES</b>	
G.I Sheets	Tata/HSL/SAIL
Aluum Grilles, Diffusers, Linear Grilles	Caryaire, Mapro,
MS Grilles, Diffusers	Tanus, Mapro, RCS
<b>VALVES</b>	
Refrigerant Valves	Brassomatic Sant
'Y' Strainers	Sant, Maharaja Casting
<b>Temp/Pressure Gauges</b>	Taylor, Fiebig, H Guru
Fire Dampers	Carryaire, Conaire
Vibration Isolators	Resistoflex, Dunlop, Kanwal
<b>INSULATION</b>	
Glass wool/Nitrile rubber	UP Twiga, Owens Corning, Kimco
Expanded Polystyrene (TF Quality)	Beardsell, Lloyd Insulation
Air Filters	Purolator, Thermadyne

V belts/Pulleys	Fenner , Dunlop
Electric Motors	Siemens, Kirloskar, NGEF, Crompton, ABB
Air Curtains	Sidwal/Thermo king
Enamel paint	Berger, Nerolac Asian
Copper Pipe	Totaline, ryku, sanghai metal, numax, camipro

### CONTRACTOR

#### Contractor signature with Date & Stamp

**Note : Vendors are requested to note that Specification mentioned in the BOQ/Price bid will be the final one, in case of any discrepancy/difference found In between the Specification of BOQ/Price bid and NIT**

### E. SPECIAL CONDITION OF CONTRACT

- Setting out the work:** a)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 consultant/ Bank's Engineer 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 consultant/ Bank's Engineer the contractor shall be responsible for the same and shall at his own expenses rectify such error, if so, required to satisfaction of the SBI.

a) The dimension provided in the schedule as well as in the drawing are likely to vary slightly according to the size & space available in the Premise Area where they are to be provided or placed, Bank have the right to slightly modified the dimensions of the items to suit the site & no claim therefore shall be made by the contractor.
- 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 due to his fault or negligence except which are due to causes beyond his control.
- Inspection of Work:** The Bank's Engineer/Consultant or their representatives shall at all reasonable time 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 for inspection and examination and test of the materials and workmanship.
- Quality of Materials, Workmanship & Test:** All materials and workmanship shall be best of the respective kinds described in the contract and in accordance with Bank's Engineer/Consultant instructions and shall be subject from time to time to such tests as the Bank's Engineer/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, labour and materials as are normally required for exang measuring sampling and testing any material or part of the work before/after incorporation in the work for testing as may be selected and required by the Architect/Consultant.

5. **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.
6. **Works to be measured:** The Bank's Engineer/Consultant may from time to time intimate to the contractor that he required the work to be measured and the contractor shall forthwith attend or send a qualified representative to assist the them in taking such measurements and calculation and to furnish all particulars or to give all assistance required by any of them. 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 authorized extra work, omissions and all variations made shall be included in such measurements.
7. **Bill Submission Format:** The bill shall be as per tender specification as detailed below along with Detail Measurement Sheet. Bill will not be accepted if detail calculation sheet of the quantity executed at site is not being attached. If required then the contractor may be ask to submit the Manufacturing certificate in due course of bill checking period

Sl. No	Description	Unit	Tender rate	Ten qty	Act qty (L/B/D)	Ted amount	Act amount

### Declaration

I/We hereby declare that I/We have read the above terms and conditions /instructions carefully and fully understood and will abide by the same.

Signature of the vendor with seal :

Place :

Date :