



Tender Ref. No. CO/Annex-Hyd/SSD/3/2023-24

Dt. 05.01.2023

**SUBJECT: REPAIR/RENOVATION AND REFURBHISHING WORKS AT
BANKS KOTI BUILDING**

**TENDER FOR PROPOSED VRV / VRF AIR CONDITIONING WORKS IN
FIRST, SECOND,THIRD, FOURTH AND FIFTH FLOORS AT BANKS
KOTI BUILDING KOTI HYDERABAD, TELANGANA STATE.**

PART-1

**PREQUALIFICATION CUM
TECHNICAL BID**

Date of issue of Tender : 05.01.2023 to 25.01.2023 During office hours.

Last date for submission of tender : 25.01.2023 up to 3.00 pm.

Opening of Bid : 25.01.2023 at 4.00 pm.

Pre bid Meeting : 17.01.2023 at 4.00 pm.

Owner:

**CHIEF MANAGER
Union Bank of India,
Support Services Department,
5-9-11, Dr.Pattabhi Bhavan,
Secretariat Road, Saifabad,
Hyderabad, 500004.
Ph:040-23252439/2444**

Consultant:



**#3-6-134, FLAT NO 302, SVC-ROYAL DM
apartments,Street no 18, Himayatnagar,
Hyderabad.Ph. 040-35561296
abhikramarchitects@gmail.com**

CO-Annex- HYDERABAD.
SUPPORT SERVICES DEPARTMENT
4th floor, # 5-9-11, Dr.Pattabhi Bhavan,
Secretariat Road, Saifabad,
Hyderabad, 500004.

NIT FOR PROPOSED VRV / VRF AIR CONDITIONING WORKS IN SECOND,THIRD, FOURTH AND FIFTH FLOORS AT BANKS KOTI BUILDING KOTI HYDERABAD, TELANGANA STATE.

Union Bank of India invites Tenders in two-bid system i.e. Technical Bid and Commercial/Price Bid from eligible established contractors AND vendors having **Registered office in Hyderabad and having executed at least one project, work of similar nature in Hyderabad** for carrying out PROPOSED VRV / VRF AIR CONDITIONING WORKS IN FIRST ,SECOND,THIRD, FOURTH AND FIFTH FLOORS AT BANKS KOTI BUILDING KOTI HYDERABAD, TELANGANA SATE. The estimated cost of work is **Rs.133.21 Lakhs +18% GST** and the **Completion** period is **180 days**. Tender forms (prequalification bid & Price Bid) can be collected against payment of **Rs.5000/- (non-refundable)** by way of pay order drawn from Nationalized Bank only in favour of “Union Bank of India” payable at Hyderabad during working hours from **05.01.2023 to 25.01.2023** up to **1.00 pm**. The tenders are also available on Bank’s website www.unionbankofindia.co.in. & Government portal www.eprocure.gov.in .Tenderer downloading documents from website, must submit pay order for document cost (**Rs.5000/-**) while submitting the tender in a separate envelope super scribing “tender cost” else tender will not be considered for opening. The last date of submission of tender is **25.01.2023** up to **3.00 PM**.

Applicants registered as **MSME / NSIC / Udyog Aadhar/SSI** Scheme are exempted from depositing cost of BID document / EMD provided they attach self attested copy of the relevant certificate. **The Bank reserves the right to reject any or all applications without assigning any reasons whatsoever. Please refer banks website and Govt. portal regarding any corrigendum for the subject tender till finalization.**

Chief Manager
CO-Annex-Hyd

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DISCLAIMER

The information is provided to prospective vendors and Contractors having Registered Office in Hyderabad, who intend to participate in bidding process for PROPOSED VRV / VRF AIR CONDITIONING WORKS IN FIRST ,SECOND,THIRD, FOURTH AND FIFTH FLOORS AT BANKS KOTI BUILDING KOTI HYDERABAD, TELANGANA STATE. for Union Bank of India for which this tender has been issued, as per the terms and conditions set out in this tender and any other terms and conditions related to such information.

This tender is neither an agreement nor an offer and the purpose of this Tender/ Request for Proposal (RFP) is to provide the Bidder(s) with information to assist the formulation of their proposals. The RFP does not claim to contain all the information each Bidder may require. While Bank has taken due care in the preparation of the information contained herein, it does not claim that the information is exhaustive. Respondents to this tender are required to make their own inquiries/analysis and should check the accuracy, reliability and completeness of the information in this RFP and where necessary obtain independent advices/clarifications. They should not rely solely on the information contained in the blank tender documents / forms. Bank may in its absolute discretion, but without being under any obligation to do so, update, amend or supplement the information in this RFP. The Bank is not responsible if no due diligence is performed by the Respondents.

The Bank, its employees and advisors make no representation or warranty and shall have no liability to any person, including any applicant or Bidder under any law, statute, rule or regulations or tort, principles of restitution or unjust enrichment or otherwise for any loss, damages, cost or expenses which may arise from or be incurred or suffered on account of anything contained in this tender or otherwise, including the accuracy, adequacy, correctness, completeness or reliability of the tender and any assessment, assumption, statement or information contained therein or deemed to form part of this tender or arising in any way for participation in this Bid stage.

Union Bank of India reserves the right to alter, amend, update or supplement the information reflected in this document or to change the process or procedure to be applied. It also reserves the right to decline bids without assigning any reason thereof.

The Bidder shall bear all its costs associated with or relating to the preparation and submission of its Bid including but not limited to preparation, copying, postage, delivery, fees, expenses associated with any demonstrations or presentations which may be required by Bank or any other costs incurred in connection with or relating to its Bid. All such costs and expenses will remain with the Bidder and Bank shall not be liable in any manner whatsoever for the same or for any other costs or other expenses incurred by a Bidder in preparation or submission of the Bid, regardless of the conduct or outcome of the Bidding process.

NOTICE FOR INVITING TENDER

To

Dear Sir,

SUBJECT: REPAIR/RENOVATION AND REFURBHISHING WORKS AT BANKS KOTI BUILDING

1) Sealed, Item Rate, tenders are invited in the prescribed format from contractors/vendors having registered office in Hyderabad for execution PROPOSED VRV / VRF AIR CONDITIONING WORKS IN FIRST ,SECOND,THIRD, FOURTH AND FIFTH FLOORS AT BANKS KOTI BUILDING KOTI HYDERABAD, TELANGANA STATE. works for the Premises of banks Koti building, koti, Hyderabad as per following details:

Estimated Cost of the Work	: Rs.133.21 lacs + GST.
Earnest Money Deposit	: Rs.1,33,219/- by way of pay order drawn From Nationalized Bank only in favor of Union Bank of India payable at Hyderabad.
Period of Completion	: 180 days
Validity of Tender	: 120 days
Date of Issue of Tender During office hours	: From 05.01.2023 to 25.01.2023
Pre-bid Meeting with Contractor	: 4.00 p.m. on 17.01.2023
Last date of submission of Tender	: Up to 3.00 p.m. on 25.01.2023
Date & Time of opening the Technical bid.	: 4.00 p.m. on 25.01.2023

The tender document can be obtained from the office of the Client: 4th floor, Support Services Department, Union Bank of India, 5-9-11, Dr.Pattabhi Bhavan, Secretariat Road, Saifabad,Hyderabad, 500004. On payment of **Rs.5,000/-** (non-refundable) by way of pay order drawn from Nationalized Bank only in favour of "Union Bank of India" payable at Hyderabad and should be submitted in original, duly stamped, and sealed in the same office.

- 2) The Item Rates under the contract include for full, final & entire completion of all works in all respects described in the tender document & as shown in drawings forming part of the contract. Contractor must quote Item Rates on estimated cost. Tenders will be opened in the presence of contracting agencies or their authorized representatives.
- 3) The tenders shall be submitted in two envelopes. The envelope No.1 shall be marked as Technical Bid and shall contain Technical Bid of the tender, EMD in the form of Demand Draft/ Pay Order drawn from Nationalized Bank, Exemption Certificate for submission of EMD, Prequalification application and any other matter.

The envelope No. 2 shall be marked as Price Bid

All the above 2 envelopes to be put in 3rd envelope super scribing the subject tender before submitting.

- 4) **Envelope No.1.** Will be opened on the due date of opening. **Envelope No. 2** of the contractors will be opened at later date (to be intimated subsequently) and of those whose prequalification application meets with eligibility criteria of the advertisement and the requirement of Tender fees, EMD and the terms/ conditions submitted, acceptance of technical bid, etc.
- 5) Tenders are to be submitted in one sealed Envelope Cover Enclosing therein the Envelope No.1 and Envelope No.2 duly Super scribed **“Tender for PROPOSED VRV / VRF AIR CONDITIONING WORKS IN FIRST ,SECOND,THIRD, FOURTH AND FIFTH FLOORS AT BANKS KOTI BUILDING KOTI HYDERABAD, TELANGANA STATE.**
- 6) The tenderer must use only the tender forms issued for the purpose to fill in the rates. Intimation of tender quoted by letter, telegram/ telex will not be acceptable. The tender must be dropped in a tender box kept at 4th floor, Support Services Department, Union Bank of India, 5-9-11, Dr.Pattabhi Bhavan, Secretariat Road, Saifabad, Hyderabad, 500004. **Delivery of the tender through courier/ post shall be avoided and any disputes arising thereof shall not be entertained.**
- 7) Tenderers are advised not to make any alteration/modification in the tender documents, Item of work or in any respect whatsoever. Violation of this requirement will make the Tender liable for rejection.
- 8) In case of postal delivery, the tenderer has to ensure that tender is reached before the due date and time and dropped in the tender box. The Bank will not be responsible for damage in the transit and delay of receipt of tender, if any or sent by a special messenger. **Tender received late shall be rejected.**
- 9) Every page of the tender documents should be signed by the person or persons submitting the tender in token of his/their having acquainted himself/themselves with the General and Special Conditions of Contract, Specifications etc. as laid down. Any tender with any of the documents not so signed will be subjected to rejection.
- 10) No consideration will be given to a tender received after the time stipulated above and no extension will be allowed for submission of the tender.
- 11) The Union Bank of India shall not be bound to accept the lowest tender and reserves the right to accept or reject any or all the tenders without assigning any reason whatsoever.
- 12) This notice inviting tenders, the conditions of tender and the duly completed form of tender etc. will form part of the Agreement to be executed by the successful tenderer with the Bank.
- 13) Tender submitted without EMD from Nationalized Bank/Exemption Certificate will be treated as incomplete and the same will be rejected out rightly. The EMD shall be strictly in the form of Pay Order / Demand Draft. No Cheques will be accepted on account of EMD. Tenders submitted with the cheque as EMD will be treated as incomplete and will be rejected.
- 14) No tender will be received after the expiry of the time notified for receiving tenders under any circumstances whatsoever.
- 15) The tender rate against each item of work/ price indicated in the schedule of quantities and rates/ prices should be indicated both in words and figures. In case of any discrepancy, the rates indicated in words would prevail.

- 16) Every tender shall be accompanied by earnest money of **Rs. 1,33,219/- (Rupees One lac Thirty Three Thousand Two Hundred Nineteen only)** by way of Demand Draft/ Pay Order drawn from Nationalized Bank only favoring UNION BANK OF INDIA, payable at Hyderabad. Tender submitted without earnest money shall be summarily rejected.
- 17) Applicants registered as MSME/ NSIC / Udyog Aadhar/ SSI Scheme are exempted from depositing cost of BID document and EMD provided they attach self-attested copy of the relevant certificate.
- 18) The successful bidder will have to submit performance security deposit for a sum of 3% of the value of the accepted tender in the form of an Account Payee DD or Performance Bank Guarantee from a commercial bank in an acceptable form safeguarding the interest of the bank in all respect. The Earnest Money shall be returned to successful bidder on submission of performance Bank Guarantee or retained in the case the successful tenderer desires to do so, as part of the performance security deposit for due fulfillment of the Contract. No interest shall be paid on this deposit.
- 19) Failure to enter into the Contract agreement within the stipulated time of 10 days from the date of acceptance of work order or withdrawal from bidding during bid validity period shall entail the forfeiture of the Earnest money Deposit.
- 20) The Earnest money of unsuccessful tenderer will be released after issue of work order, without any interest.
- 21) Performance Security deposit of the successful contractor who fails to carry out the job after issue of work order by the bank shall be forfeited.
- 22) All tenders in which any of the prescribed conditions are not fulfilled or incomplete in any respect are liable to be rejected.
- 23) This tender notice shall form part of the contract documents.
- 24) Notwithstanding the above condition, bank shall have the right to reject any bid without assigning any reason thereof.

CHIEF MANAGER
SSD-Annex-Hyd

BIO - DATA OF CONTRACTING AGENCY

1. Name of the firm :

Address :

Telephone No :

Office :

Residence :

Mobile :

Fax :

E-Mail :

2a) Whether proprietary/partnership/
Pvt. Ltd. / Public Ltd. (certificate
of registration / partnership deed
to be enclosed as Annexure-I).

b) Name of the Proprietor,
Partners, Directors

I)

II)

c) Year of establishment :

3. Registration with Tax Authorities :

i) Income-tax (PAN) No. :

ii) GST No. :

iii) EPF Regn. No. :

iv) ESI Regn. No. :

v) TIN / VAT No. :

(Copies of certificates of registration with relevant authorities to be enclosed as
Annexure-II-A, II-B, II-C, II-D & II-E)

4. Names of the Bankers with address & telephone numbers:

I)

II)

5. Enclose solvency certificate of the : Enclosed/ Not enclosed
Amount of 30% of estimated cost

Note: The solvency certificate should be addressed to “Whom so ever it may concern”
should be specifically for this work and shall be 30%of the estimated cost. Solvency
Certificate shall be issued only on after 01.07.2022.

6. Furnish copies of audited balance-Sheet and Profit & Loss A/C. for the last 3 years i.e. Assessment years-2019-2020,2020-2021,2021-2022 as Annexure-IV-A, IV-B & IV-C. : Enclosed/ Not enclosed

7. Registration with Govt. / Public Sector / Banks (certificates of Registration to be enclosed as Annexure-V.

Name of the Organization	Year since empanelled

8. Give details if at present involved in litigation in similar type of contracts:

Sr. No.	Name of Project	Name of Employer	Nature of work	Work order dated	Date of completion of work	Value Rs.

9. Details of civil suit, if any, that arose during execution of contract in the past 10 years. :

10. Specify maximum value of single value project executed during the last three years. :

11. Name & relation, if any, with the staff Member of Union Bank of India. :

12. Details of work executed during the last 3 years:

Type of work	Work executed for (name of the Institution / Body)	Nature of work (in brief)	Location	Value Rs.	Duration of work with dt Commence completion		If work left incomplete or terminated (give reasons)

Note: Copies of work orders along with Xerox copies of relevant TDS certificate, satisfactory completion certificate obtained from the client shall be enclosed as Annexure VI. Please note without the copies of certificates, your application is liable to be rejected.

13. Details of work on hand (photo copies of performance certificate, work orders issued by valued clients, preferably Banks, Govt., and Semi-Govt. Bodies should be enclosed as Annexure VII).

Type of work	Work executed for (name of the Institution / Body)	Nature of work (in brief)	Location	Value Rs.	Duration of work, stipulated time	Present stage of work

14. Details of Pre-Qualifying work (Filling of columns is mandatory and to be supported by copies of work order and completion letters as per the criteria. On Non-filling of columns or not enclosing credentials, the application form submitted will be rejected without assigning any reason thereof.)

Name of the work	Name of the client	Work order reference/date	Completion letter reference/date	Value of work completed

15. LIST OF NAME/S OF PROPRIETOR/ PARTNERS & EMPLOYEES

Name	Qualifications	Experience	Particulars of work done	Employed in your firm since	Value of work done

16. Turnover in last 5 years:

Sr. No.	Year	Turnover (Rs.in lacs)	Income-tax paid	VAT paid	Service Tax paid
1	2017-18				
2	2018-19				
3	2019-20				
4	2020-21				
5	2021-22				

Copies of income-tax returns / assessment orders for each year to be enclosed as Annexure VIII-A,B,C,D& E

17. List of equipment / machinery owned:

Sr. No.	Name of equipment	Year of manufacture	Nos. available

18. PRE-QUALIFICATION CRITERIA:

It is mandatory that all the agencies shall have registration for PAN /VAT / TIN / GST/ESI/EPF.

(Estimated Cost: Rs.133.21 lakhs +18% GST)

Sl. No	Criteria	Documents Required
1	The applicant shall have Registered Office in Hyderabad	The firm should have registered office in Hyderabad and submit the proof of having office at Hyderabad
2	The Contractor should have minimum of 07 (Seven) years' experience in similar field as on 31.12.2022.	Copy of Registration of the Firm or Copy of incorporation. At least one copy of the work order and completion certificate from the clients prior to 31.12.2015.
3	a. Bidder should have a minimum of Rs.39.96 Lakhs (Excluding GST / Service tax or any other taxes) annual average turnover per year during last three financial years. i.e. 2019-20, 2020-21, 2021-22. b. the applicant should not suffered any financial loss for the last three years	Audited balance sheet and P&L account for years mentioned and certificate from the Chartered Accountant. In addition to that, tenderer should satisfy the condition for not suffering financial loss for the last three year.
4	The Tenderer should have executed the following work in a single contract during the last Seven (7) years ending with 31.12.2022 for at least, One (1) similar work costing Rs. 106.57 LAKHS Excluding GST / Service tax or any other taxes (80% of Tender value) OR Two (2) similar works each costing Rs.66.60 LAKHS Excluding GST / Service tax or any other taxes (50% of Tender value) OR. Three (3) similar works each costing Rs. 53.28 LAKHS Excluding GST / Service tax or any other taxes & minimum 90 HP (40% of Tender value) Out of the above, at least one work (Min. Rs.53.28 Lakhs with minimum 90 HP) should be executed in the Hyderabad	Satisfactory completion certificates of the works clearly indicating the cost & nature of work executed, date of commencement & completion issued by the Clients. The works shall Mandatorily be supported with form 26AS regarding the bills claimed for the Certificate submitted.
5	The contractor must have valid GST registration, PAN number.	Copy of the GST registration certificate and copy of PAN card.

6	The contractor should have Mandatorily the EPF Registration no.	Copy of the EPF registration certificate shall be Submitted.
7	The contractor should have Mandatorily the ESI Registration no.	Copy of the ESI registration certificate shall be Submitted.
8	The bidder should not have been black-listed/ barred by any Public Sector Bank, RBI or IBA or any other Government/PSU agencies during last Seven years.	An undertaking in this regard is to be submitted to Bank by Bidder on Rs.100/- Stamp Paper. Bank has right to verify the same from concerned authorities/ agencies.
9	The contractor should submit the Labour License .	Copy of the certificate of Central Labour License shall be Submitted by the successful tenderer .
10	The company/ vendor should be an authorized dealer for the any brand given in NIT.	Copy of dealership certificate & authorized letter for this work from manufacturer (OEM) should be submitted. A certificate from the manufacturer shall also be provided, to support and maintain the system for a period of 5 years on behalf of the tenderer/ contractor.
11	Solvency certificate should be addressed to “Whom so ever it may concern” should be specifically for this work and shall be minimum of Rs.39.96 Lacs. Solvency Certificate shall be issued only on after 01.07.2022	Copy of the Solvency certificate should be submitted.

SIMILAR WORKS :

SIMILAR WORK MEANS CARRYING OUT VRF AIRCONDITIONING WORKS FOR GOVERNMENT, NATIONALIZED BANKS, PSU'S, REPUTED CORPORATE COMPANIES, MNC'S, IT COMPANIES.

NOTE.

- BIDDER MUST COMPLY WITH ALL THE CRITERIA MENTIONED ABOVE. NON- COMPLIANCE OF ANY OF THE CRITERIA WILL ENTAIL REJECTION OF THE BID SUMMARILY. THE BANK RESERVES THE RIGHT TO VERIFY / EVALUATE THE DOCUMENTS / CERTIFICATES SUBMITTED AS EVIDENCE BY THE BIDDER.
- RELEVANT COMPLETION CERTIFICATES OF HAVING COMPLETED SIMILAR WORKS (**WORK ORDERS ALONE WILL NOT BE CONSIDERED**) ISSUED BY COMPETENT AUTHORITY MUST BE ENCLOSED FAILING WHICH YOUR TENDER WILL BE SUMMARILY REJECTED.
- CERTIFICATES ISSUED BY THE PRIVATE BUILDERS, SUB CONTRACTUAL WORKS ARE NOT ELIGIBLE.
- COMMITTEE OF UNION BANK OF INDIA WILL INSPECT THE SITES OF WORKS / OFFICES OF CLIENTS FOR WHICH RELEVANT CERTIFICATES ARE ENCLOSED IN PRE QUALIFICATION TENDER.
- NO JOINT VENTURE PROJECTS ARE PERMITTED / ALLOWED.

19. LIST OF ENCLOSURES:

ANNEXURE NO.	PARTICULARS	TICK IF ENCLOSED
I	Certificate of registration of Company / partnership deed.	
IIA, IIB, IIC, IID, IIE	Certificates of registration with Income Tax, GST, EPF, ESI and VAT / TIN authorities.	
III	Solvency Certificate.	
IVA, IVB, IVC	Audited Balance Sheet & Profit & Loss A/c. Statement for 2019-20, 2020-21&2021-22.	
V	Certificates of Registration with Govt. / Public Sector / Banks.	
VI	Copies of work orders along with Xerox copies of relevant TDS certificate, satisfactory completion certificate mentioning value of work.	
VII	Copies of performance certificate, work orders issued by valued clients, preferably Banks, Govt. and Semi-Govt. Bodies. At least One qualifying work mentioned by the Contractor in Bid is to be from Govt./Public Sector/Banks.	
VIIIA, VIIIB, VIIC, VIID, VIIE	Copies of income-tax returns/ assessment orders for each year from 2019 to 2022	
IX	Copy of dealership certificate & authorized letter for this work from manufacturer (OEM)	

Note: In absence of any of the above enclosures, your application is likely to be rejected.

Contractors who fulfill all the eligibility criteria as above only will be considered as qualified for opening of price bids.

DETAILS OF PREQUALIFYING WORKS - I

(Filling all details is mandatory without which application will be summarily rejected)

1.	NAME OF FIRM & ADDRESS FOR WHOM THE WORK IS EXECUTED	
2.	DETAILS OF WORK DONE BY THE FIRM	1. VRF / VRVAC WORKS = RS
3.	PHOTOGRAPHS OF WORK COMPLETED (PLEASE ENCLOSE COPY)	
4.	VALUE OF CONTRACT EXECUTED	
5.	BRIEF DISCRPTION OF THE WORK	
6.	PERIOD DURING WHICH THE CONTRACT IS EXECUTED	
7.	WORK ORDER REFERENCE (PLEASE ENCLOSE COPY OF THE WORK ORDER)	
8.	COMPLETION CERTIFICATE REFERENCE (PLEASE ENCLOSE COPY OF THE COMPLETION OF WORK)	
9.	DELAY IN EXECUTION OF WORK	
10.	WHETHER TIME SCHEDULE IS ADHERED TO	
11.	ANY OTHER INFORMATION WHICH YOU CONSIDER WILL HELP US IN TAKING OUR DECISION.	

PLACE:
DATE:

SIGNATURE WITH OFFICE SEAL

DETAILS OF PREQUALIFYING WORKS - II

(Filling all details are mandatory without which application will be summarily rejected)

1.	NAME OF FIRM & ADDRESS FOR WHOM THE WORK IS EXECUTED	
2.	DETAILS OF WORK DONE BY THE FIRM	1. VRF / VRVAC WORKS = RS
3.	PHOTOGRAPHS OF WORK COMPLETED (PLEASE ENCLOSE COPY)	
4.	VALUE OF CONTRACT EXECUTED	
5.	BRIEF DISCRIPTION OF THE WORK	
6.	PERIOD DURING WHICH THE CONTRACT IS EXECUTED	
7.	WORK ORDER REFERENCE (PLEASE ENCLOSE COPY OF THE WORK ORDER)	
8.	COMPLETION CERTIFICATE REFERENCE (PLEASE ENCLOSE COPY OF THE COMPLETION OF WORK)	
9.	DELAY IN EXECUTION OF WORK	
10.	WHETHER TIME SCHEDULE IS ADHERED TO	
11.	ANY OTHER INFORMATION WHICH YOU CONSIDER WILL HELP US IN TAKING OUR DECISION.	

PLACE:
DATE:

SIGNATURE WITH OFFICE SEAL

FORMAT OF CONFIDENTIAL REPORT

(To be submitted by the Client of applicant on their letter head in sealed envelope to the Bank - Mandatory requirement)

To:

The Chief Manager,
UNION BANK OF INDIA
Support Services Department
5-9-11, Dr.Pattabhi Bhavan,
Secretariat Road, Saifabad, Hyderabad, 500004.

Sir,

Confidential Report on M/s. _____

This is to certify that M/s. _____, having Office at _____ have completed the work of _____. Confidential Report for our project executed is as under:

1.	DETAILS OF PROJECT EXECUTED BY THE FIRM	
2.	APPROXIMATE AREA OF RENOVATION	
3.	DATE OF COMMENCEMENT OF PROJECT	
4.	DATE OF COMPLETION OF PROJECT	
5.	TOTAL VALUE OF PROJECT EXECUTED	
6.	QUALITY OF SERVICE RENDERED	
7.	COMPETENCE TO HANDLE WORKS	
8.	INTEGRITY AND RELIABILITY OF THE FIRM	
9.	DEALING IN EXECUTION OF WORK	
10.	WHETHER TIME SCHEDULE IS ADHERED TO	
11.	WHETHER ANY PENALTY IMPOSED FOR THE DELAY	
12.	GENERAL ATTITUDE OF THE FIRM	
13.	ANY OTHER INFORMATION WHICH YOU CONSIDER WILL HELP US IN TAKING OUR DECISION	

PLACE:

SIGNATURE: _____

NAME: _____

DATE:

DESIGNATION: _____ OFFICE SEAL

DECLARATION

I / We have read the instructions appended to the Proforma and I / We understand that if any false information is detected at a later date, any future contract made between ourselves and Union Bank of India, on the basis of the information given by me / us can be treated as invalid by the Bank and I / We will be solely responsible for the consequences.

I / We acknowledge that:

It shall be deemed that by submitting the Proposal, I/we have:

- a) made a complete and careful examination of the RFP;
- b) received all relevant information requested from the Authority;
- c) accepted the risk of inadequacy, error or mistake in the information provided in the RFP or furnished by or on behalf of the Authority or relating to any of the matters referred above;
- d) satisfied itself about all matters, things and information, including matters referred above, necessary and required for submitting an informed Application and performance of all of its obligations there under;
- e) acknowledged that it does not have a Conflict of interest: and
- f) Agreed to be bound by the undertaking provided by it under and in terms hereof.

I / We agree that the decision of Union Bank of India in selection of contractors will be final and binding to me / us.

I / We agree that I / we have no objection if enquiries are made about the work listed by me / us in the accompanying sheets.

I / We agree that I / We have not applied in the name of sister concern for the subject empanelment process.

All the information furnished by me hereunder is correct to the best of my knowledge and belief.

Place :

SIGNATURE

Date :

NAME & DESIGNATION

SEAL OF ORGANISATION

INSTRUCTION WITH REGARD TO SUBMISSION OF TENDER

- 1) Rates should be quoted both in figures and words in columns specified. All erasures and alterations made while initials of the tenderer must attest filling the tender. Overwriting of figures is not permitted. Failure to comply with either of these conditions will render the tender invalid and it will be the option of Union Bank of India to accept or reject the tender. No request of any change in rate or conditions after opening of the tender will be entertained.
- 2) In the case of figures, the word Rs. should be written before the figures of rupees and the word 'P' written after the decimal figures e.g. Rs. 3.25 P. In the case of words, the word Rupee should similarly precede and the words "Paise only" should be written at the end, closely following each the Item rate. The word "only" should not be written in the next line unless the rate quoted is in whole Rupees closely followed by the word "only". The amount should invariably be upto two decimal places.
- 3) The different Schedules should be filled as follows:
 - (a) The "Rate" Column wherever applicable to be legibly filled in ink in both figures & words.
 - (b) The "Amount" Column also to be legibly filled in ink in both figures and words.
 - (c) All corrections to be initialed.
 - (d) No over writing is allowed.
 - (e) The figure of Item of rate shall be legibly filled in ink in both figure and words.
- 4) Errors in the bill of quantities shall be dealt with in the following manner.
 - a. In the event of any discrepancy between the rates quoted in words and the rates in figures the former shall prevail.
 - b. In the event of an error occurring in the amount column of the bills of quantities as a result of the wrong extension of the unit rate and the quantity, the unit rate shall be regarded, as firm and extension shall be amended on the basis of the rates.
 - c. All the errors in totaling in the amount column and in carrying forward the totals shall be corrected.
- 5) The tender shall be signed and dated at all places provided therein. Also, all pages, drawings and corrections/ alterations shall be initialed. The tender submitted on behalf of a firm shall be signed by all the partners of the firm or by a partner who has the necessary authority on behalf of the firm to enter into the proposed contract. Otherwise the tender may be rejected by Union Bank of India.
- 6) The time allowed for completion of works is **180 days** from the date of issuance of work order by contractor or handing over the site whichever is later. Time shall be considered the essence of contract.
- 7) It shall be the responsibility of the contractor to arrange for water and electricity required for completing construction. However, contractor will have to make arrangement of pipeline for distributing water.
- 8) Every tender shall be accompanied by earnest money of **Rs 1,33,219/-** by way of Demand Draft/ Pay Order drawn from Nationalized Bank only favoring UNION BANK OF INDIA, payable at Hyderabad. Tender submitted without earnest money shall be summarily rejected. Applicants registered as MSME/ NSIC / Udyog Aadhar/ SSI Scheme are exempted from depositing cost of BID document and EMD provided they attach self-attested copy of the relevant certificate.
- 9) The successful bidder will have to submit initial performance security deposit for a sum of 3% of the value of the accepted tender in the form of an Account Payee DD or Performance Bank Guarantee from a commercial bank in an acceptable form safeguarding the interest of the bank in all respect within a period of 10 days from the issuance of work order.. The Earnest Money shall be returned to successful bidder on submission of performance Bank Guarantee

or retained in the case the successful tenderer desires to do so, as part of the performance security deposit for due fulfillment of the Contract. No interest shall be paid on this deposit.

- 10) Failure to enter into the Contract agreement within the stipulated time of 10 days from the date of acceptance of work order or withdrawal from bidding during bid validity period shall entail the forfeiture of the Earnest money Deposit.
- 11) The Earnest money of unsuccessful tenderer will be released after issue of work order, without any interest.
- 12) The tenderer shall submit his tender after carefully examining the whole of the tender document and the terms and conditions of contract, the drawings and specifications, the schedule of quantities etc., and also after examining the site and conditions prevailing in and around site.
- 13) The Bank does not bind himself to accept the lowest or any tender and reserve to them the right of accepting the whole or any part of the tender and tenderer is bound to perform the same at the rates quoted. The Bank will not be bound to accept the lowest tender and reserves the right to accept or reject any or all the tender without assigning any reasons whatsoever. The work may also be divided among the contracting agencies depending on the exigencies of the Bank.
- 14) Bank shall not be responsible for any expenses incurred by bidders in connection with the preparation and delivery of their bids, including expenses incurred during bidding.
- 15) Bids from consortium shall not be accepted. Telex / Telegraphic / Fax / Email bids shall not be accepted. Late/ Delay / post tenders shall be rejected, and representative of such bidder shall not be allowed to attend the bid opening.
- 16) The Bank is not concerned with any rise or fall in the prices of materials and labor. The rates quoted shall include all costs, allowances, taxes including sales tax on works contract or any other charges including any enhanced labor rates etc. which may become effective for any reason including those due to acts of Government/ Statutory Bodies enacted from time to time by the State and or the Central Government. Under no circumstances, shall the Bank be held responsible for compensation or loss to the contractor due to any increase in the cost of labor or materials etc.
- 17) Contractor to coordinate and assist the Architect/Interior Designer in obtaining all statutory approvals and any other State and Central rules in force. Any expenses incurred in obtaining such approvals are deemed included in the rates quoted by the Contractors.
- 18) Tenders shall remain valid for a period of 120 days from the date of opening of the tender which period may be extended by mutual agreement and the tenderer shall not cancel or withdraw the tender during the initial validity period of 120 days.
- 19) The successful tenderer shall be bound to implement the Contract and mobilize and sign specified agreements within 10 days from the date of acceptance of work order.
- 20) Tenderer must include in their rates all taxes excluding GST. Due to change in taxes structure by orders from Central Govt. / State Govt. after opening of tenders shall be reimbursed to the contractor as per actual and upon verifying the proof of having made the payment.
- 21) This contract shall be an Item Rate contract. The Contractor shall be paid for actual quantity of work done, as measured at site including any deviation plus or minus. The rate of any non-schedule items of work shall be decided as mentioned in the conditions of contract.
- 22) The tender drawings exhibited/enclosed are preliminary drawings intended for the guidance of the Contractor only. They may be subject to revision and alteration without vitiating any

of the terms of the contract and the Contractor shall be bound to execute the works as shown on the final drawings without claiming any extra payment.

- 23) No correspondence will be entertained in respect of this tender other than any clarifications strictly pertaining to this tender.
- 24) The tender price quoted by a tenderer shall be kept strictly confidential and shall not be divulged to any other party even approximately before the time limit for delivery of tender. The only exception be for obtaining an insurance quotation, you may give your insurance company or agent any essential information they ask for, so long as it is done in strict confidence. No information about other's tender price should be obtained and no arrangement with anyone else should be made whether or not he submits the tender.
- 25) For electrical, sanitary, water supply and drainage work, tenderer must possess respective valid licenses from the competent authority of the area where the site is located.
- 26) Contractor should sign at the end of every page prior to submitting the tender. Conditional tenders will be summarily rejected.
- 27) COMPLETION PERIOD OF THE PROJECT WILL BE **180 days** from the date of issuance of work order by contractor or handing over the site whichever is later.
- 28) The contractor shall be responsible for obtaining all the necessary statutory permissions for the same.
- 29) COMMERCIAL EVALUATION: Only the technically qualified bidders who are successful will be asked to participate in commercial bid/price Bid opening. The indicative commercial bids of all the bidders' found ineligible as per the requirements of this RFP will be unopened or returned to them unopened against acknowledgement.
- 30) After opening of Commercial Bid, the lowest amount quoted by the bidder will be termed as L1 Bidder. The evaluation of the Commercial Bids will also be done by the Project Architect and tender evaluation committee.
- 31) If any cartel formation is found during any stages of the tender process, the bank has every right to cancel all the offers of shortlisted vendors and will be debarred / expelled from applying from the tenders for Union Bank for 3 years. The Bank's decision is final and binding.

**The Chief Manager,
UNION BANK OF INDIA
Support Services Department
5-9-11, Dr.Pattabhi Bhavan,
Secretariat Road, Saifabad, Hyderabad, 500004.**

- 32) " Conditional offers " are liable to be rejected and disqualified

TENDER FORM

To,
The Chief Manager,
UNION BANK OF INDIA
Support Services Department
5-9-11, Dr.Pattabhi Bhavan,
Secretariat Road, Saifabad, Hyderabad, 500004.

TENDER FOR PROPOSED VRV / VRF AIR CONDITIONING WORKS IN FIRST ,SECOND,THIRD, FOURTH AND FIFTH FLOORS AT BANKS KOTI BUILDING KOTI HYDERABAD, TELANGANA STATE.

Sir,

1. We have read and examined the following documents as received by us:
 - a) Notice Inviting Tender
 - b) Instructions to Tenderer
 - c) Conditions of Contract.
 - d) Supplementary Conditions.
 - e) Specifications
 - f) Drawings
 - g) Schedule of Quantities.
 - h) Addition condition of contract
2. We are well aware and familiar with CPWD/ PWD, **Schedule of Rates 2022** and their specifications, CPWD/ PWD Specification, BIS publication and National Building code which shall apply to this contract to supplement any missing details in this contract in order of preference. Further to the above, we have visited and examined the site of the proposed works and have acquired the requisite information relating thereto as affecting the tender invited by Bank.
3. We agree that any other terms or conditions of contract or any general reservation which may be printed on any correspondence emanating from us in connection with this tender or with any contract resulting from this tender shall not be applicable to this tender or to the contract.
4. We have obeyed the rules about confidentiality of tenders and will continue to do so as long as they apply.
5. We are enclosing along with our tender an earnest money of **Rs.1,33,219.00 (Rupees One lac Thirty Three Thousand Two Hundred and Nineteen only)** drawn from Nationalized Bank favoring Union Bank of India, payable at Hyderabad. We hereby agree that this sum shall be forfeited, in the event of our tender being accepted and if we fail to execute the contract when called upon to do so.
6. Subject to and in accordance with paragraphs 3 & 4 above and the terms and conditions contained or referred to in the documents listed in paragraph 1, we agree and offer to execute all the Works referred to in the said documents upon the terms and conditions contained or referred to therein and to carry out such deviations as may be ordered to be valued as per the conditions of contract.

7. We undertake to complete and deliver the whole of the works within a period i.e. **6 Months** as specified in the contract and further confirm that the time allowed for completion is adequate. Time allowed for completion of entire job or part job assigned shall be reckoned from the tenth day of the date of acceptance of work order. We shall be under the obligation to pay the sum as stated in the contract for every day that the works shall remain incomplete, damages as compensation subject to the conditions of contract relating to extension of time.
8. We hereby agree that unless & until a formal agreement is prepared & executed in accordance with the Articles of agreement, this tender together with your acceptance thereof, shall constitute a binding contract between us.
9. EMD Submitted by us shall be treated as Initial Security Deposit. EMD submitted shall be by way of DD/PO drawn from Nationalized Bank in favour of UNION BANK OF INDIA, Hyderabad..
10. Validity of the tender is 120 days from the date of opening of tender or it may be beyond 120 days if mutually accepted.
11. The Bank is at liberty to accept or reject any tender, without assigning any reasons whatsoever.
12. The work may be split up in the first instance as per exigencies of the Bank. It may be split up in more parts or parts combined if so desired by the Bank without assigning any reasons whatsoever. We will not have any claim either for loss of profit or revision in rates.
13. Adherence to the pert chart will be ensured by us as the project is to be executed in a very strict time frame.
14. We are aware that the quantities of work indicated in the bill of quantities are approximate, may vary to any extent, even it may be omitted. We will not have any claim of any kind against the Bank.

Signed in the capacity of duly authorized
to sign tenders for and on behalf of

Address Telephone No.....

..... Telex No.

..... Fax No.

.....

Date:

SUPPLEMENTARY CONDITION

On the acceptance of his tender, the contractor will be required to execute an Indemnity Bond with-in 10 days of issue of work order in favor of the Bank against third party claims, civil or criminal complaints, site mishaps and other accidents or disputes and, against any damages, loss or expenses caused to bank and bank's any of articles, fixtures, fittings, infrastructure, due to or resulting from any negligence, misconduct or breach of duty on the part of the contractor, his subcontractors/assignees or his employees and agents, representatives etc., as per the appropriate Indemnity Bond attached.

It will also be covered by labor laws of the Govt. of India.

Any other conditions suggested by the Bank may be added subsequently.

The EMD/PSD may be forfeited:

If the Bidder withdraws his Bid during the period of Bid validity specified in this RFP.

or

If the Bidder makes any statement or submit information which turns out to be false / incorrect at any time prior/post of issuing Purchase order.

or

If the Bidder fails to furnish security Deposits or is there any benefit of doubt of formation of cartel by bidders.

or

If the bidder backs out or do not accept the work order after being declared L-1 bidder.

or

In case of a successful Bidder, if the Bidder fails to sign/execute the contract in accordance with this RFP.

or

If a bidder refuses to accept the corrections of errors calculated in accordance with the provisions of the bidding documents, its bid shall be rejected and its EMD shall be forfeited.

INDEMNITY BOND
(On Non-Judicial Stamp Paper of Rs. 100/-)

KNOW all men by these presents that I/We _____ do hereby execute Indemnity Bond in favour of the Union Bank of India on this _____ day of _____ 2023.

WHEREAS Union Bank of India, (address of the office) _____, have appointed _____ as the Contractors for their Proposed Union Bank of India Project at _____.

THIS DEED WITNESS AS FOLLOWS:

I/We _____, duly authorised by Resolution dated.....(in case of a Company) hereby do Indemnify and save harmless Union Bank of India, _____ against

10. Any third party claims, civil or criminal complaints/liabilities, site mishaps and other accidents or disputes and/or damages occurring or arising out of any mishaps at the site due to faulty work, negligence, faulty construction and/or for violating any law, rules and regulations in force, for the time being while executing/executed works by me/us.
11. Any damages to any of articles, fixtures, fittings, infrastructure of bank, loss or expenses to Bank due to or resulting from any negligence or breach of duty on the part of me/us or my sub contractor's if any, servants or agents.
12. The Contractor shall at all times indemnify and keep indemnified the Bank against all losses, claims, damages or compensation including under the provisions of the payment of the Wages Act 1936, Minimum Wages Act 1948, Bank's Liability Act 1938, Workman's Compensation Act 1923, the Maternity Benefit Act 1961, the Bombay Shops and Establishments Act 1947, Industrial Disputes Act 1947, and Contract Labour (Regulation and Abolition) Act 1970 and Employees State Insurance Act 1948, Motor Vehicles Act 1988 or any modifications thereof or under any other law relating thereto and rules made there under from time to time or as a consequence of any accident or injury to any workman or other person in or about the work whether in the employment of the Bank or Contractor or not, and also against all costs, charges and expenses of any suit, action or proceedings whatsoever out of such accident or injury or combination of any such claims arising out of and in the course of the execution of the contract.
13. Any claim by an employee of mine/ours or of sub-contractors if any, under the Employee's Compensation Act and Owners Liability Act, 1939 or any other law, rules and regulations in force for the time being and any Acts replacing and/or amending the same or any of the same as may be in force at the time and under any law in respect of injuries to persons or property arising out of and in the course of the execution of the contract work and/or arising out of and in the course of employment of any workman/employee.

Any act or omission of mine/ours of sub-contractor's if any, our/their servants or agents which may involve any loss, damage, liability, civil or criminal action.

IN WITNESS WHEREOF THE _____ has set his/their hand on this day of _____ 2022.

SIGNED AND DELIVERED BY THE _____ NAME AND ADDRESS
AFORESAID _____ (Contractor)

IN THE PRESENCE OF WITNESSES:

- 1.
- 2.

PERFORMANCE BANK GUARANTEE FORMAT

(To be prepared on Stamp paper issued in the name of Bank)

This BANK GUARANTEE No. _____ made this day of _____ between _____ a bank incorporated and having its registered office at _____ (hereinafter called Bank) which expression shall unless repugnant to the context or contrary to the meaning thereof include its successors and assigns on the one part and **UNION BANK OF INDIA**, a body corporate constituted under the Banking Companies (Transfer of Undertakings) Act, 1970 and having its Central Office annex building at 5-9-11, Pattabhi Bhavan, Saifabad, Hyderabad-500004 to the context or contrary to the meaning thereof include its successors and assigns on the other part. WHEREAS in pursuance to the agreement No. _____ dated _____ (hereinafter called CONTRACT) entered into between Union Bank of India (hereinafter called OWNER and _____ a Company incorporated in _____ (hereinafter called CONTRACTOR) which expression shall unless repugnant to the context or contrary to the meaning thereof include its successors and assigns, for supply of _____ as envisaged in the Contract, Contractor has to submit a Performance Bank Guarantee for Rs. _____ (Rupees _____ only). CONTRACTOR accordingly agrees to furnish the Performance Bank Guarantee as herein after contained towards fulfillment of all of its obligations under the contract. Now this Deed witness as follows:

1. In pursuance of the Contract, the Bank hereby guarantees as a direct responsibility to OWNER that the BANK is holding the amount of Rs. _____ (Rupees _____ only) at Owner's disposal and hereby promises and shall be bound to pay to OWNER, forthwith at Owner's written notice stating that the contractor has failed to fulfill its obligations under the contract for reasons for which contractor is liable and without any protest or demur and without recourse to contractor and without asking for any reasons as to whether the amount is lawfully asked for by Owner or not, the entire amount or the portion thereof as mentioned by Owner in the notice. The decision of the Owner as to whether the terms and conditions of this Performance Bank Guarantee have been observed or not shall be final and binding on the BANK. In any case, however the Bank's responsibility under this Performance Bank Guarantee is limited to Rs. _____ (Rupees _____ only).
2. This Performance Bank Guarantee shall be valid for an initial period of _____ months from the date of this Bank Guarantee No. _____ dated _____ given by the Bank to Owner become effective. Upon issuance of Commissioning/ Erection/Completion certificate according to terms of contract on expiry of _____ months after the issuance of the above-mentioned certificate 69 of commissioning / erection / completion certificate, the Performance Bank Guarantee shall become null and void.
3. This Performance Bank Guarantee shall be in addition to and shall not affect or be affected by any other security now or hereafter held by Owner on account of money hereby intended to secure and Owner at its discretion and without any further consent from the Bank, and without affecting its rights against the Bank, may compound with, give time or other indulgence to or make any other arrangement with Contractor and nothing done or omitted to be done by Owner in pursuance of any authority or permission contained in this guarantee, shall effect discharge of the liability of the Bank.

4. UNLESS PREVIOUSLY CANCELLED BY THE OWNER, this Performance Bank Guarantee will remain in force initially up to _____months from the effective date of Bank Guarantee No. _____ dated _____ given by the Bank to the Owner and subject to provisions of paragraph 2 above will stand automatically cancelled on the expiry of the said period. Unless demand or claim under this Bank Guarantee is made on Bank in writing within three months from the date of expiry of this Bank Guarantee, all the rights of Owner against the Bank shall be forfeited, and Bank shall be relieved and discharged from all the liabilities hereunder.
5. We are liable to pay the guarantee amount or any part thereof under this bank guarantee only and only if you serve upon a written claim or demand on or before (Date of expiry of guarantee plus one-year claim period shall be stipulated).

Any notice by way of request, demand or otherwise hereunder may be sent by post to the Bank, addressed as aforesaid, and if sent by post, it shall be deemed to have been given at the time when it would be delivered in due course of post, and in proving such notice, when given by post, it shall be sufficient to prove that the envelope containing the notice was posted and a certificate, signed by an officer of the owners, to the effect that the envelope was so posted, shall be conclusive.

6. The Performance Bank Guarantee is to be returned to the Bank after its expiry in terms of Paragraph 4 above.
7. The Bank declares that it has the power to issue this guarantee and the undersigned have full power to do so. Dated _____ this _____ day of _____22 (Indicate the name of the Bank with stamp)

ARTICLES OF AGREEMENT

(Draft will be modified by Bank's Law Officer as per requirement)

ARTICLES OF AGREEMENT made at _____ this _____ day of _____ Two Thousand and twenty-Three.

BETWEEN

UNION BANK OF INDIA, a body corporate constituted under the Banking Companies (Acquisition and Transfer of Undertakings) Act, 1970 and having its having its Central Office annex building at 5-9-11, Pattabhi Bhavan, Saifabad, Hyderabad-500004 ,represented by hereinafter called "the Bank/owner/employer" (which expression shall, unless it be repugnant to the context or meaning thereof, include its successors and assigns) of the **ONE PART**

AND

MESSRS _____, having its registered office at _____, hereinafter called the "Contractor" (which expression shall unless repugnant to the context or meaning thereof, include its successors and permitted assigns) of the **OTHER PART**.

WHEREAS

- i. The Bank is desirous of _____ (Works) on its _____ at _____.
- ii. The Bank has already appointed and retained M/s _____, having its Office at _____ and Registered Office at _____ as Architect / Consultant for the Works or the Project.
- iii. The Bank has caused the drawings and bills of quantities showing and describing the Works to be done to be prepared by or under the direction of the Consultants / Architect;
- iv. The Bank had invited tenders for _____ work in accordance with the general conditions of contract, special conditions of contract, technical specifications, bills of quantities and working drawings, as prepared by the Interior Consultants/ Architect and furnished to the Contractor.
- v. Having examined the general conditions of contract, special conditions of contract, technical specifications, bills of quantities and working drawings as prepared by the Consultants/ Architect, the Contractor offered to execute, complete and maintain the whole of the Works relating to the Project in conformity with the said general conditions of contract, special conditions of contract, technical specifications, bills of quantities and working drawings and in accordance with instructions issued by the Consultants / Architect and the Contractor submitted its tender for the contract sum of Rs. _____ towards the said work.
- vi. The tender submitted by the Contractor was, after negotiations, modified/ altered upon the Contractor agreeing to revise the rates of certain items and further offering a rebate for execution and completion of the Project thereby reducing the tender amount to Rs. _____ as confirmed by its letters dated _____.
- vii. Towards the implementation of the Project, the Contractor has supplied the Bank with a fully priced copy of the said bills of quantities (which copy is hereinafter referred to as "the Contract Bills") and the drawings numbered as mentioned in the Annexure 11 of the Tender document inclusive (hereinafter referred to as "the Contract Drawings") and the Contract Bills and the contract Drawings have been signed by or on behalf of the parties hereto.
- viii. The Contractor has already agreed with the Bank to implement and execute the Project in full on the basis of the contract documents as hereinafter defined on the terms and conditions therein contained.

- ix. The parties are now executing this Agreement setting out the basic terms of the agreement between them for smooth implementation and execution of the Project without any unnecessary difference or dispute.

NOW IT IS HEREBY AGREED as follows:

1. The Contract Document is comprising of
 - i. Tender document including technical bid (Part.-I) and price-bid (Part.-II).
 - ii. Notice Inviting Tender issued vide letter _____
 - iii. Subsequent letters issued by the Bank vide _____
 - iv. Clarifications submitted by the contractor vide letter dt. _____.
 - v. Minutes of Meeting held on _____
 - vi. Rebate/ Discount offered by the contractor vide letter _____
 - vii. Work Order issued by the Bank vide letter _____
 - viii. Acceptance letter _____ from the contractor
 - ix. Drawings numbering as mentioned in the Annexure 11 of the Tender document enclosed along with the tender document.
- 1.1 Unless the context otherwise requires the contract documents above mentioned shall be harmoniously construed and in the chronological order.
- 1.2 Unless otherwise expressly provided under these presents, contract documents (iii) to (ix) above shall be construed as modifying only those general and special terms and conditions in tender document in so far and to the extent referable to the clauses in the said tender document.
- 1.3 Unless otherwise stated expressly hereunder, all the general and special terms and conditions shall apply and binding on the contractor.
2. The Contract Document is complimentary. What is called for in any one shall be as binding as called for by all. The aforesaid shall form integral part of contract and in the event of any inconsistency between any provisions herein the provisions of the Contract Documents shall prevail. When any of the General and Special Conditions are at variance, the condition stipulated in the Special Conditions of Contract shall supersede relevant provisions in General Conditions. For all matters not specifically provided for herein the provisions of General and Special Conditions in the Tender Documents shall apply and the rights and liabilities of the parties shall be decided accordingly. The decision of the Bank in this regard shall be final and binding.
3. All time limits stated in the Contract Document are of the essence of the contract where the work has to be completed within 180 days failing which liquidated damages will be recovered @ 1% of contract amount for per week of delay subject to maximum recovery of 10 % of the contract amount
4. For the consideration hereinafter mentioned, the Contractor shall carry out and complete the Works in conformity with the contract documents and in accordance with the instructions issued by the consultant from time to time including all modifications extra and additional works and obligations to be carried out either on the Site or at any factory or work shop or any other place for subsequent incorporation as required for the due performance of the contract.
5. The general character and the scope of the Works is illustrated and defined by the specifications and the bills of quantities herewith attached and by the signed drawings. The scope includes furnishing all materials, labor, tools, equipment, transportation and management necessary for and incidental to the construction and completion of the Works. If the Contractor shall find any discrepancy in or divergence between the contract drawings and/or the contract bills he shall immediately give to the Consultant a written notice

specifying the discrepancy or divergence and the Consultant shall issue instructions in regard thereto which shall be complied with by the Contractor.

6. INTENT

The intention of agreement is to secure the performance of the Contractor's obligations to the satisfaction of the Bank/ Architect/ Consultant. All labor, material, equipment, constructional plant and transportation necessary for the proper execution of the Project is to be provided by the Contractor and should only be of the approved manufacturer/agencies respective kinds as described in the Contract Documents which is to be subjected from time to time to such tests as the Engineer/ Consultant's representative may direct. In case the required material/services of approved manufacturers/agencies are not available or are not upto the mark the Contractor shall procure material/ services from such other manufacturer/agencies as may be approved by the Consultant / Bank and the Contractor shall submit rate analysis for such material.

7. EXTENT

The Contractor shall carry out and complete the Works in every respect in accordance with this contract and with the directions of and to the reasonable satisfaction of the Consultant. The Consultant may in their absolute discretion and from time to time issue further drawings, details and/or written instructions and written explanations whole of which are collectively referred to as Consultants' instructions. All such drawings and instructions shall be consistent with the Contract Document true developments thereof as reasonably inferable there from.

8. TYPE OF CONTRACT

The Contract is Item Rate contract. The Contractor shall be paid for the actual quantity of Work done, as measured at Site, at the Item quoted by him in the Contract Bills. The contractors have

8.1 Been informed that the schedule of approximate quantities is liable to alteration by omission, deduction, substitution or additions at the discretion of the Consultant/Bank without affecting the terms of the contract and no compensation to Contractor.

8.2 Fully and correctly understood the meaning of all the tender documents, the General Conditions of Contract, Special Condition of Contract, Technical Specifications, Bill of Quantities and working drawings or part thereof.

9. CONTRACTORS COVENANTS

9.1 The Tender form conditions, priced schedule of quantities, contract drawings and General and Special Conditions of Contract, specifications, Drawings, priced Bill of Quantities, Schedule of Rates and Prices, if any, Tender, pre-contract correspondence, Letter of Intent/Acceptance, Work order, shall be read and construed as forming part of this agreement and the Contractor shall abide by and submit themselves to all the conditions and stipulations contained therein; which are not specifically incorporated herein;

9.2 The Contractor shall obtain necessary permissions/ certificates/ order from the Competent Authority in respect of workmen employed by them for the Project and shall keep the Bank safe, harmless and reimburse all amounts/expenses incurred or suffered by the Bank in connection with any such claim;

9.3 The Contractors shall not make any claim as regards want of information of any particular point or any change in the rate or conditions save and except as provided herein;

9.4 The Contractors shall have a duly authorized agent at the place of Work to accept services of notice and to agree to extras, omissions, additions and substituted items of Works and rates from the commencement of the Work until it is virtually completed.

9.5 In the event of any discrepancy between the details and/or description given in the Bill of Quantities, the Drawings and the Technical Specifications, such item shall be deemed to have been priced in accordance with the details and/or description confirming to the most superior provisions contained in any of the following :-

- a) Bill of Quantities
 - b) Drawings
 - c) Technical Specifications
- 9.6 It shall be understood that the details and/or description not specifically mentioned in the Bill of Quantities and/or the drawing shall be the same as those mentioned in the Technical Specification. Any further interpretation of above Clause shall be at the discretion of the Consultants, whose decision shall be final and binding on the parties to the contract.
- 9.7 The Contractors shall not make any claim for increase in the contract consideration on the basis of incorrectness and insufficiency of the information available at the time of submitting the Tender and/ or incorrectness and insufficiency of the rates and prices stated in the price bill of quantity and schedule of rates and prices or otherwise alleging insufficiency of the tender amount to cover their obligation under the contract or matters concerning the execution of the Project.
- 9.8 The Contractor shall be fully responsible for the adequacy, stability and safety of all site operations and methods of construction, provided that the Contractor shall not be responsible, except as may be expressly provided in the Contract, for the design or specification of the Permanent Works, or for the design or specification of any Temporary Works prepared by the Consultant.
- 9.9 The Contractor shall promptly inform the Consultant of any error, omission, fault and other defects in design, drawing or specifications for the Works, which are discovered while reviewing the Contract Documents or in the process of execution of the Works.
- 9.10 The Contractor shall arrange for the permits and licenses for release of materials, which are under Government control subject to the Bank giving all the necessary assistance and upon being advised by the Consultant signing any forms or applications that may be necessary.
- 9.11 The Contractor shall comply with the provisions of legislation prevailing during the currency of contract.
10. The Contractor shall keep the Bank saved harmless and indemnified against claims if 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 workmen.
11. **GENERAL CONDITIONS**
- 11.1 The schedule of Quantities given in the Contract Bill is provisional and is meant to indicate the intent of the Work and to provide a uniform basis for tendering. The Bank reserves the right to increase or decrease any of the quantities or to totally omit any item of Work and the Contractor shall not claim any extras or damages on these grounds.
- 11.2 Any error in description or in quantity or omission of items from the Contract Bill shall not vitiate this Contract but shall be treated as a variation.
- 11.3 The rates quoted by the Contractor in the priced bill of quantities (Contract Bills) shall be treated as firm and the contract sum shall be deemed to have been calculated with reference to the cost of execution of Works as set out in Contract Documents and shall not be adjusted or altered for any reason.
12. Notwithstanding anything contained elsewhere in any of the clauses of the tender, the prices/rates quoted for each item/Work in the Bills of Quantities shall be deemed to be inclusive of all direct and indirect costs, and taxes, etc. on any of inputs, royalty on quarried items etc. that may be involved in completing the item/Work as required in the fulfillment of all obligations under the contract and to the satisfaction of the Engineer. Additional Taxes/ Levies by Central/ State Government legislations after opening of tender shall be reimbursed to the contractors as per actual.
13. 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 repairing 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 anyway the power 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 within one month of the date fixed for completion of the Work or of the date of certificate of completion furnished by the Consultant and payment shall be made within eight (8) weeks from the date of receipt of final Certificate from the Consultant.

14. **INSURANCE**

Without limiting the obligations and responsibilities under Contract Clause for Care of Work the Contractor shall effect third party insurance with an insurer and in terms approved by the Bank in the joint names of the Bank and the Contractor-

- 14.1 against all loss or damage from whatever cause arising, other than the excepted risks stated in contract clause of the General Conditions for which the Contractor is to be held responsible under the terms of the Contract so as to cover the Bank and the Contractor during the period beginning with commencement of the Works until the date stated in the Certificate of Completion for the whole of the Works.
- 14.2 against any loss or damage occasioned by the Contractor in the course of any operations carried out by him for the purposes of completing the outstanding Work during the Defects Liability period pursuant to the Undertaking given at the time of applying for the issue of Certificate of Completion.
- 14.3 against any loss or damage occasioned by the Contractor in the course of any operations carried out by him for rectifying any defect in perfection or fault appearing during the progress of the Work or during the Defects Liability Period.
- 14.4 against any loss or damage occasioned by the Contractor in the course of any operations carried out by him for searching the cause of any defect, imperfection or fault appearing during the progress of the Works or during the Defects Liability Period.
- 14.5 against any liability for or in respect of any damages or compensation payable at law in respect of or in consequence of any accident or injury to any workmen or other person in the employment of the sub-Contractor provided the sub-contractors shall not have insured against such contingency. (Insurance against accident etc. to workman)
- 14.6 Unless otherwise instructed the Contractor shall insure the Works and keep them insured until the virtual completion of the contract against loss or damage by fire and/or earthquake, flood.
- 14.7 The Contractor shall maintain Contractors' all risks insurance policy covering loss, damage by any means, theft, burglary etc. of all materials and equipments, temporary Works and the Work shall be insured for a total sum equal to the value of all such items plus 10% of such value.

Provided always that all the insurance under the contract documents shall be arranged by the Contractor from a first class insurance company having a branch near the site who can deal with all matters pertaining to the subject, the insurance must be placed with a company approved by the Bank, in the joint names of the Bank and the Contractor for such amount and for any further sum if called to do so by the Bank, the premium of such further sum being allowed to the Contractor as an authorized extra.

15. The Contractor shall deposit the policy and receipt for premiums paid with the Bank within 21 (twenty-one) days from the date of issue of Work order unless otherwise instructed. In default of the Contractor insuring as provided above, the Bank on his behalf may so insure and may deduct the premiums paid from any money due, or which may become due to the Contractor. The Contractor shall as soon as the claim under the policy is settled or the Work reinstated by the Insurance Company should they elect to do so, proceed with due

diligence with the completion of the Works in the same manner as though the insured risk/contingency has not occurred and in all respects under the conditions of the contract. The Contractor in case of rebinding or reinstatement after the occurrence of the insured risk/contingency shall be entitled to such extension of time for completion as the Bank may deem fit.

15.1 Such insurance shall continue during the whole of the time of continuance of Work and/or during such time that any persons are employed by him on the Works and shall when required produce before the Bank or the consultant, such policy of insurance and the receipt for payment of the earlier premium and the current premium.

15.2 The insurance shall be effective in such manner that the Bank is indemnified under the policy.

16. The Contractor shall provide for adequate cover to the Bank as per the provisions of Workmen Compensation Act.

17. The Contractor shall make available the insurance cover note before the commencement of the Work and shall notify any change in the nature or extent of the Work and also make available additional insurance of Works if required in special circumstances.

18. **DEFECTS LIABILITY**

18.1 Any defects, shrinkages or other faults which shall appear within the Defects Liability Period of 12 months from the date of handing over the works and which are due to materials or workmanship not in accordance with this contract or on account of failure on the part of the Contractor to comply with any of his obligations expressed or implied shall be specified by the consultant in a schedule of defects which he shall deliver to the Contractor not later than 14 days after the expiration of the Defects Liability Period, and within a reasonable time after receipt of such schedule the defects, shrinkages and other faults therein specified shall be made good by the Contractor and (unless the consultant shall otherwise instruct, in which case the contract sum shall be adjusted accordingly) entirely at his own cost.

18.2 The Contractor shall make good at his own costs and to the satisfaction of the consultant, all defects, shrinkages or small faults arising in the opinion of the consultant/ engineer from Work or materials not being in accordance with the drawings or specifications or schedule of quantities or the instructions of the Engineer/ consultant which may appear within the "**Defects Liability Period of 12 months from the date of handing over completed site**" referred to in the Appendix to General Conditions. All defects, shrinkages or small faults arising from any other cause not attributable to the Contractor shall be rectified by the Contractor as an additional work.

18.3 In the event of failure of the Contractor to carry out any such work to the satisfaction of the Engineer/ consultant, the Bank shall be entitled to carry out the same at the Contractor's costs and all expenses consequential and incidental thereto shall be deducted by the Bank from any monies due or to become due to the Contractor.

18.4 When in the opinion of the Engineer/consultant any defects, shrinkages or other faults which he may have required to be made good under sub-clause (18.1) and (18.2) of this condition shall have been made good he shall issue a certificate to that effect, and completion of making good defects shall be deemed for all the purposes of this contract to have taken place on the day named in such certificate.

19. **SPECIAL RISK**

The Contractor shall not be liable for or in respect of any consequences arising out of any special risks as enumerated in relevant clause of the General Conditions. The responsibilities, rights and liabilities of the parties in such case shall be determined with respect to Clause 65 of the General Conditions.

20. **STATUTORY OBLIGATIONS, NOTICES, FEES AND CHARGES**

The Contractor shall comply with and give all notices required by any Act of Parliament, any instrument rule or order made under any Act of Parliament, or any regulation or byelaw of any local authority or of any statutory undertaker which has any jurisdiction with regard to the Works or with whose systems the same or will be connected. The Contractor before making any variation from the contract drawings or the contract bills necessitated by such compliance shall give to the Engineer / consultant a written notice specifying and giving the reason for such variation and the Engineer / consultant may issue instructions in regard thereto. If within 7 days of having given the said written notice the Contractor does not receive any instructions in regard to the matters therein specified, he shall proceed with the Work confirming to the Act of Parliament, instrument, rule, order, regulation or byelaw in question and any variation thereby necessitated shall be deemed to be a variation required by the Engineer / consultant.

There shall be no employer -Employee relationship whatsoever between the bank and the successful bidder/his sub-contractors/ agents/ labourers/ employees/ staff/ representatives. The bidder shall be liable for compliance of all labor laws applicable in connection with the contract and shall be responsible for payment of wages/arrears of wages under the applicable laws.

21. **MATERIALS, WORKMANSHIP, SAMPLES, TESTING OF MATERIALS**

- 21.1 All the Works specified and provided for in the specifications 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 workmanlike 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 consultant /Engineer during the execution of the Work, and to his entire satisfaction.
- 21.2 If required by the consultant /Engineer the Contractor shall have to carry out tests on materials and workmanship in approved materials testing laboratories or as prescribed by the consultant /Engineer at his own cost to prove that the materials etc., under test conform to the relevant I.S. Standards or as specified in the specifications. The necessary charges for transporting, testing etc., shall have to be borne by the Contractor. No extra payment on this account should in any case be entertained.
- 21.3 In case contractor is delaying or refusing or avoiding testing of material, the consultant/engineer shall arrange for carrying out testing of material and the necessary expenditure in carrying out the testing, transportation and incidental expenses shall be recovered from the contractor.
22. All the materials (except where otherwise described) stores and equipment required for the full performance of the Work under the contract must be provided through normal channels and must include charge for import duties, sales tax, octroi and other charges and must be the 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 workmanlike manner. Samples of all materials to be used must be submitted to the Consultant/Engineer when so directed by the Consultant / Engineer and written approval from Consultant / Engineer must be obtained prior to placement of order.
23. During the inclement weather the Contractor shall suspend concreting and plastering for such time as the Consultant /Engineer may direct and shall protect from injury all Work when in course of execution. Any damage (during constructions) to any part of the Work for any reason due to rain, storm or neglect of Contractor shall be rectified by the Contractor in an approved manner at no extra cost.
24. If the Work be suspended by reason of rain, strike, lock-outs or any other cause, the Contractor shall take all precautions necessary for the protection of Work and at his own expenses shall make good any damage arising from any of these causes.
25. 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 tradesmen or sub-contractor and any damage caused must be made good by the Contractor at his own expenses.

26. 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. Materials designated in this specification indefinitely by such term as "Equal" or "Other approved" etc. specific approval of the Bank/Consultant has to be obtained in writing. The term equivalent means, if material specified is not available, then after satisfying to the fact, the consultant / engineer may give other material to be used which will be subject to adjustment in purchase prices.

27. INSPECTION OF WORKS

27.1 All materials and workmanship shall be subject to inspection, examination and test at any and all times during manufacture and/or construction. The Consultant may issue instructions requiring the Contractor to open up for inspection any Work covered up or to arrange for or carry out any test at any and all times.

The Consultant / Engineer shall have the right to reject the defective material and workmanship or require its correction.

27.2 The test of any materials or goods (whether or not already incorporated in the Works) or of any executed Work, and the cost of such opening up or testing (together with the cost of making good in consequence thereof) shall be added to the contract sum unless provided for in the contract bills or unless the inspection or test shows that the Work, materials or goods are not in accordance with this contract.

27.3 The Consultant / Engineer may issue instructions in regard to the removal from the site of any Work, materials or goods, which are not in accordance with this contract.

27.4 The Engineer may (but not reasonably or vexatious) issue instructions requiring the dismissal from the Works of any person employed thereon.

27.5 On the failure of the Contractor to comply with any of the Engineer's instructions the Engineer may proceed to replace or correct such material/workmanship entirely at the cost of the Contractor.

28. REMOVAL OF IMPROPER WORK

The Bank 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 Consultant/ Engineer are not in accordance with specification or instructions, the substitution or proper re-execution of any Work executed with materials or workmanships not in accordance with the drawings and specifications or instructions. In case the Contractor refuses to comply with the order the Bank 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/ Engineer 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 Engineer shall relieve the Contractor from his liability in respect of unsound Work or bad materials.

29. PROTECTIVE MEASURES

29.1 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 Sundays and other holidays.

29.2 Contractor shall indemnify the Bank against any possible damage to the building, roads, or members of the public in course of execution of the work.

29.3 The contractor shall provide necessary temporary enclosures 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 works and making good all works disturbed.

30. NOTICE AND PATENTS OF APPROPRIATE AUTHORITY AND OWNERS.

- 30.1 The Contractor shall conform to the provisions of any Acts of the Legislature relating to the Work, and to the Regulations and Bye-laws of authorities, and/or any water, lighting and other companies, and/or authorities with whose systems the structures were proposed to have connection and shall before making any variations from the drawings or specification that maybe associated to so conform, give the Consultant/ Engineer written notices, specifying the variations proposed to be made and the reasons for have making them and apply for instruction thereon. The Consultant / Engineer on receipt of such intimation shall give a decision within a reasonable time.
- 30.2 The Contractor/s shall arrange to give all notices required for by the said Acts, Regulations or Bye-laws 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 due with the Bank.

31. ASSIGNMENT AND SUB-LETTING

- 31.1 The whole of the Works included in the contract shall be executed by the Contractor and the Contractor shall not directly or indirectly transfer, assign or underlet the contract 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.
- 31.2 The Contractor shall not assign the Contract or any benefit or interest therein or there under, otherwise than by a charge in favour of the Contractor's Bankers of any monies due or to become due under this Contract, without the prior written consent of the Bank.
- 31.3 The Contractor shall not sub-let the whole of the Works except where otherwise provided by the contract, the Contractor shall not sublet any part of the Works without the prior written consent of the Engineer, which shall not be unreasonably withheld, and such consent, if given shall not relive the Contractor from any liability or obligation under the contract and he shall be responsible for the acts, defaults and neglects of any sub-contractor, his agents, servants or workmen as fully as if they were the acts, defaults or neglects of the Contractor, his agents, servants or workmen. Provided always that the provision of labor on a piecework basis shall not be deemed to be a subletting under this clause. The Contractor shall co-ordinate and shall be responsible for all aspects of his sub-contractor(s) without being relieved of any of his obligation under the contract.
- 31.4 If, the contracting agencies are violating the tender terms and sub-let the work without Bank's consent and the same is brought to the notice of the Bank, the Bank will be entitled to recover 10% of such work as penalty besides initiating measures as provided in contract.
32. If, at any time during the execution of the Works, the Consultant/ Engineer shall require the Contractor to make boreholes or to carry out exploratory excavation, such requirement shall be ordered in writing and shall be deemed to be an addition ordered under the provisions of the General Conditions unless a provisional sum in respect of such anticipated Work shall have been included in the Bill of Quantities.
33. The Contractor shall in connection with the Works provide and maintain at his own costs all lights, guards, fencing and watching when and where necessary or required by the Consultant / Engineer or the Bank, or by any duly constituted authority, for the execution and for the protection of the Works, and/or for the safety and convenience of the public / others.
34. The Contractor shall, in accordance with the requirements of the Consultant/ Engineer, afford all responsible opportunities for carrying out their Work to any other Contractors employed by the Bank and their workmen and to the workmen of the Bank and of any other duly constituted authorities who may be employed in the execution on or near the Site of any Work not included in the contract or of any contract with the Bank may enter into in connection with or ancillary to the Works. The Contactor will not be paid any compensation on this account.

35. Shall keep the Site reasonably free from unnecessary store of constructional plant and machinery, wreckage and rubbish during progress of Works and on completion leave the whole site clean and in a workmanlike condition to the satisfaction of the Consultant / Engineer.

36. **Default of Contractor**

36.1 If the Contractor

- i. being a company presents a petition for winding up and/or goes into liquidation (other than voluntary liquidation for the purposes of amalgamation or reconstruction) or
 - ii. shall make an assignment or a composition 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
 - iii. 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 therefore, or
 - iv. if the Contractor shall suffer execution to be issued, or
 - v. shall suffer any payment under this contract to be attached by or on behalf of and of the creditors of the Contractor, or
 - vi. shall assign, charge or encumber this contract or any payments due or which may become due to the Contractor without the consent in writing of the Bank first obtained, there under, or
 - vii. shall agree to carry out the contract under a committee of inspections of his creditors, or
 - viii. shall have an execution levied on his goods, or
 - ix. shall use improper materials or workmanship in carrying on the Works, or
 - x. shall in the opinion of the Bank not exercise such due diligence and make such due progress as would enable the Work to be completed within due time agreed upon, and
 - xi. the Consultant/ Engineer certifies in writing that the Contractor has failed to commence the Works or failed to proceed with the Works after the suspension order when so called upon by the Consultant/ Engineer, or
 - xii. shall abandon the contract,
 - xiii. without reasonable excuse has failed to commence the Works or have suspended the progress of Works for 28 days after receiving from the Consultant/ Engineer written notice to proceed on
 - xiv. has failed to remove materials from the site or to pull down or replace for 28 days after receiving from the Consultant/ Engineer written notice that the said materials or Work has been condemned and rejected by the Consultant/ Engineer under these conditions or
 - xv. despite previous writings by the Consultant/ Engineer in writing has failed to execute Works in accordance with the contract, or is persistently or flagrantly neglecting to carry out his obligations under the contract or as to the detriment of good workmanship or in defiance of the Consultant / Engineer's instructions to the contrary, sublet any part of the contract then and in any of the said cases the Bank may notwithstanding previous waiver
- a) determine the contract by after giving 14 days' notice in writing to the effect as hereinafter mentioned, but without thereby affecting the powers of the Bank or the obligations 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 executed had been executed by or on behalf of the Contractor (without thereby creating

any trust in favour of the Contractor)

- b) further the Bank or his agent, or servants, may enter upon the Site and take possession of the Work and all Constructional Plant, amenities, unused materials, tools, scaffolding, sheds, machinery, steam and other power, utensils and materials lying upon premises or the adjoining lands or roads reserved for the execution of the Works 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 Works or
 - by employing any other Contractors or other persons or person to complete the Works, and the Contractor shall not in any way interrupt or do any act, matter of 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 Works when the Works shall be completed, or as soon 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 the Bank may sell the same by Public Auction and shall give credit to the Contractor for the amount so realized.
- 36.2 Any expenses or losses incurred by the Bank in getting the Works 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.
- 36.3 Upon such entry and expulsion by the Bank the Consultant/ Engineer may adopt an appropriate mode at his discretion and certify the amounts, if any, that had at the time of such entry and expulsion reasonably been earned in respect of the work actually done by him and the value of any unused or partially used materials, any Constructional Plant and any amenities brought into existence exclusively for execution of the Works.
- 36.4 If the Bank shall enter and expel [the Contractor] under this Clause, he shall not be liable to pay to the Contractor any money on account of the Contract, until the expiration of the Defects Liability Period and thereafter until the costs of execution, damages for delay in completion, if any, and all other expenses incurred by the Bank have been ascertained and the amount thereof certified by the Consultant / Engineer. The Contractor shall then be entitled to receive only such sum or sums, if any, as the Consultant / Engineer may certify would have been payable to him upon due completion by him after deducting the said amount. If such amount shall exceed the sum which would have been payable to the Contractor on due completion by him, then the Contractor shall, upon demand, pay to the Bank the amount of such excess and it shall be deemed a “debt due” by the contractor to the Bank and shall be recoverable accordingly.

37 NOTICES

- 37.1 All certificates, notices or written orders to be given by the Bank or by the Consultant/ Engineer to the Contractor under the terms of the Contract shall be served by sending by registered post or by Courier or delivering the same to the Contractor’s principal place of business, or such other address as the Contractor shall nominate for this purpose.
- 37.2 All notices to be given to the Bank or to the Consultant/ Engineer under the terms of the Contract shall be served by sending by registered post or by Courier or delivering the same to the respective addresses nominated for that purpose in Part II of these conditions.
- 37.3 Either party may change a nominated address to another address in the country where the Works are being executed by prior written notice to the other party and the Consultant / Engineer may do so by prior written notice to both parties.
- 39 The work should be executed is time bound and Bank has the right to exit/cancel /terminate the contract with immediate effect and engage another contractor, in case the bidder defaults or commit breach of any Tender terms. In such an event, bank shall recover

from the bidder the cost, expenses for loss, damage caused due to the bidder, by various means not limited to forfeiture of security deposit and unpaid bills.

40 **ARBITRATION**

- 40.1 Wherever, in any of the documents forming part of the Contract, the Bank's Asst. General Manager/ Dy. General Manager, SSD Central Office Mumbai, has been vested with the final powers, his decision, opinion, certificate or any other discretion shall be final conclusive and binding on the parties and shall be without appeal. All other matters shall be subject to the right of arbitration.
- 40.2 All disputes or differences of any kind whatsoever save and except matters referred to in clause 1) arising out of or in connection with the Contract, whether during the progress of Work or after Completion and shall after written notice by either party to the contract to the other of them and to the Bank hereinafter mentioned be referred for adjudication to two Arbitrator, one each to be nominated by the Contractor and the Bank, who shall thereafter appoint an Umpire. The provisions of Indian Arbitration and Conciliation Act 1996 shall apply for the purposes.
- 40.3 The Work under the Contract shall, however, continue during the arbitration proceedings and no payment due or payable to the Contractor shall be withheld on account of such proceedings.
- 40.4 The Arbitrator shall be deemed to have entered on the reference on the date he issued notice to both the parties fixing the date of the first hearing.
- 40.5 The Arbitrator may from time to time, with the consent of the parties, enlarge the time for making and publishing the award.
- 40.6 The Arbitrator shall give a separate award in respect of each dispute or difference referred to him. The Arbitrator shall decide each dispute in accordance with the terms of the contract and give a reasoned award. The venue of arbitration shall be such place as may be fixed by the Arbitrator in his sole discretion.
- 40.7 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 who may direct to and by whom and in what manner, such costs or any part thereof shall be paid and may fix or settle and amount of costs to be so paid.
- 40.8 The award of the Arbitrator shall be final and binding on both the parties.
- 40.9 Subject to aforesaid the provisions of the Arbitration & Conciliation Act 1996 or any statutory modification or re-enactment thereof and the rules made there under, and for the time being in force, shall apply to the arbitration proceeding under this clause.
- 40.10 The Bank and the Contractor hereby also agree that arbitration under clause shall be a condition precedent to any right to action under the contract with regard to the matters hereby expressly agreed to be so referred to arbitration.

IN WITNESS WHEREOF the Bank and the Contractor have set their

Respective hands to these presents through their authorized representatives the day, month and year first herein above written.

Signed by the said

In the presence of

Bank

Witness

Name:

Address

Signed by the said

In the presence of

Contractor

Witness

Name:

Address

DOCUMENTS ATTACHED TO THE AGREEMENT FORMING PART & PARCEL OF THE AGREEMENT

- Tender document & tender drawings.
- NIT vide
- Addendum issued vide
- Contractor's letter dated
- Work order vide.

GENERAL INSTRUCTIONS TO CONTRACTORS AND SPECIAL CONDITIONS

- 1) Canvassing in connection with tenders is strictly prohibited and the tenders submitted by the contractors who resort to canvassing will be liable to rejection.
- 2) The Tender Form must be filled in English and all entries must be made by the hand and written in ink. If any of the documents is missing, or unsigned, the Tender may be considered invalid by the Bank in its discretion.
- 3) Performance Security deposit to be kept @ 3 % of the contract value. This deposit is kept with the bank. The Performance Security Deposit may be refunded 15 days after the end of completion of defect liability period i.e after one year of work completion, provided the contractor has satisfactorily carried out all the works and rectified all the defects in accordance with the conditions of contract. The Bid Security or Bank Guarantee/security deposit may be forfeited by the Bank for any default/failure to implement any of the terms by the successful bidder.
- 4) The contractor shall not assign the contract. He shall not sub-let any portion of the contract except with the written consent of the Bank. In case of breach of these conditions, the Bank may serve a notice in writing on the contractor rescinding the contract whereupon the Security Deposit shall stand forfeited to the Bank, without prejudice to his other remedies against the contractor. Central Govt./ State Govt. organization will not be allowed to sublet the work on back to back basis.
- 5) The contractor shall carry out of all the work strictly in accordance with Drawings, details and instructions of the Architect, Consultant and the Bank. If in the opinion of the Architect, consultant or the Employer, changes have to be made in the design and with the prior approval in writing of the Employer, they desire the contractor to carry out the same, the contractors shall carry out the same without any extra charge. The Bank's decision in such cases shall be final and shall not be open to arbitration.
- 6) A Schedule of probable quantities in respect of each work and specifications accompany these special conditions. The Schedule of probable quantities is liable to alteration by omission, deductions or additions at the discretion of the Architect/ Bank. No claim will be entertained from the contractor on account of loss of profit over revising the tender rates.
- 7) The Tenderer must obtain for himself on his own responsibility and at his own expenses all the information which may be necessary for the purpose of filling of Tender and for entering into a contract and must examine the drawings and must inspect the site of the work and acquaint himself with all local conditions, means of access to the work, nature of the work and all matters pertaining thereto no compensation will be paid on account of not getting proper information. Furnishing works shall be done in a phased manner as it is a functioning office and complete site cannot be handed over in a single go.
- 8) The rates quoted in the Tender shall be inclusive of all charges for clearing of site before commencement as well as after completion, as occasion shall require or when ordered so to do, and fully reinstate and make good all matters and things disturbed during the execution of the work and to the satisfaction of the Bank / Consultant.
- 9) Time allowed for carrying out the work as mentioned in the Memorandum shall be strictly observed by the contractor and its shall be reckoned from the date of issuance of work order or the date of handing over the site to the contractor whichever is later. The work shall throughout the stipulated period of the contract be proceeded with all due diligence and if the contractor fails to complete the work within the specified period i.e. 180 days, he shall be liable to pay compensation as defined in the conditions of contract.

- 10) The contractor shall not be entitled to any compensation for any loss suffered by him on account of delays in commencing or executing the work, whatever the cause of delays may be, including delays arising out of modifications to the work entrusted to him or in any sub-contract connected therewith or delays in awarding contracts for other trades.
- 11) The successful Tenderer is bound to carry out any items of work necessary for the completion of the job even though such items are not included in the quantities and rates. Schedule of instructions in respect of such additional items and their quantities will be issued in writing by the Architect/ consultant with the prior consent in writing of the Bank.
- 12) The successful Tenderer must co-operate with the other contractors appointed by the Employer so that the work shall proceed smoothly with the least possible delay and to the satisfaction of the Architects/ Consultant.
- 13) The contractor must bear in mind that all the work shall be carried out strictly in accordance with the specifications made by the Architect/ Consultant and also in compliance of the requirements of the Authorities concerned and no deviation on any account will be permitted.
- 14) The contractor will have to obtain completion / clearance certificate in respect of services such as water supply, sewerage, etc. The contractor will also obtain permanent water connection for the entire project. The Bank will pay necessary fee to be made to Govt. authorities.
- 15) The Contractor shall strictly comply with provision of safety code annexed hereto.
- 16) The contractor shall indemnify Union Bank of India, against any claim or legal action arising out of the said Act due to the failure of non-compliance of the provisions of the said Act and the penalty or any other amount levied by the authorities, shall be recoverable from the payments due to the contractors.
- 17) The Contractor shall comply with the provision of the Apprentices Act,1961, and the Rules and Orders issued there under from time to time. Failure to do so will be in a breach of the contract and the Architect / consultant and the Bank may in their discretion cancel the contract. The contractor shall also be liable for any pecuniary or other liabilities arising on account of any violation by him of the provisions of the Act.
- 18) The Security Deposit of the successful Tender will be forfeited if he fails to comply with any of the conditions of the contract.
- 19) The contractor shall be responsible for the observance of all Central Rules and Regulation framed by the Central Government under the Contract Labour (Regulation and Abolition) Act,1970. The Bank shall be entitled to deduct all damages, which it might suffer on account of non-observance of these rules by the Contractor, from the amount payable to the Contractor.
- 20) Contractors are not allowed to remove materials brought at Site against which advances have been paid. Wastages/excess material & machinery/tools shall be removed from the site on regular basis without causing any disturbance to the office area.
- 21) The Contractor is to provide at all times during the progress of the works and the maintenance period / defect liability period proper means of access, with ladders, gangways, etc., and the necessary attendance to move and adopt as directed for the inspection or measurement of the works by the Consultant or their representatives.
- 22) Materials shall be of approved quality and the best of their kind available and shall generally conform to I.S. Specifications. The Contractor shall order all the materials

required for the execution of work as early as necessary and ensure that such materials are on site well ahead of requirement for use in the work. The work involved calls for approved standard of workmanship combined with speed and to the entire satisfaction of the Architect/ consultant. All the material shall be approved by the Consultant / Bank before use. Contractor to arrange samples well in time.

- 23) The Contractors shall after completion of the work clear the Site of all debris and left-over materials at his own expenses to the entire satisfaction of the Bank / Consultant and Municipal or other public authorities.
- 24) The contractor herewith agrees that in respect of inspection of works by the Chief Technical Examiner of the works, a wing of Central Vigilance Commission and the bills of the contractor including all supporting vouchers, abstract etc. to be made after payment of the bills and if as a result of such audit and technical examination any sum is found to have been over paid in respect of any work done by the contractor under the contract of any work claimed by him to have been done by him under the contract and found not to have been executed or any work is found not to have been executed in accordance with the contract, the contractor shall be liable to refund the amount of over payment made already and it shall be lawful for the Bank to recover the same from him in any manner the Bank deems fit either from any payments due and / or becoming due to the contractor or from the security deposit or through any further bills and / or final bill or in any other manner whatsoever not excluding through recourse to legal action. The certification of bills / measurements by consultant / Architect and Engineer will be scrutinized by the Bank's Central Office / Audit / Vigilance and any deficiency will be corrected accordingly. Contractor cannot insist for payment just because it is signed by consultant / architect / engineer. The contractor herewith agrees to co-operate with the Bank / Consultant while such examinations of works and redo the things without any extra cost to the Bank. It is essential and agreed condition of the contract that any such action taken by the Bank shall deemed to be the fully legal and valid and binding on the contractor.
- 25) Contractors are requested to note that no extra item or deviated item of work to be executed without taking prior permission, the Bank shall not be held responsible for the payment of such works executed. Contractors will have to submit all the particulars including purchase bills/price list for the materials along with the rate analysis for verification of Item Rates.
- 26) If it is observed the existing bank properties are damaged then the contractors will have to make good the same at their own cost.
- 27) If contractors fail to pay the taxes/royalties to the Authorities concerned, the Bank reserve their rights to recover the said amount from the amount payable to the contractor and pay the same to the Authorities concerned.
- 28) Work is to be executed & measurements are to be paid as per the detail specification & description of item given in the Standard Specification Book except for the items which are specifically mentioned in the tender for which the details of item and mode of measurements to be followed as indicated separately in the conditions of contractors.
- 29) If there are any contracting clauses mentioned in the tender, the interpretation of the same will be done by the Architect / consultant. However, the decision of the Bank will be final and binding.
- 30) After awarding the work, contractor shall get registered with the office of the Labour commissioner and inform Bank accordingly. Contractors shall follow all rules and regulations stipulated by the Labour Commissioner strictly.
- 31) Contractors shall quote consistent rates for the items of similar nature or analogous in specifications for the sections in schedule of quantities. If it is observed that the rates

quoted for similar nature of items or analogous in specification under different sections, are inconsistent, then the Bank reserves his right to consider the lowest of rates for all such items and work out the final amount for payment, unless the competent authority finds that there is justifications for such inconsistent rates.

- 32) The contractor shall give a list of his relatives working with the Bank along with their designations and addresses.
- 33) No employee of the Bank is allowed to work as a contractor for a period of two years of his retirement from Bank service, without the previous permission of the Bank. The contract is liable to be cancelled if either the contractor or any of his employees is found at any time to be such a person who had not obtained the permission of the Bank as aforesaid before submission of the tender or engagement in the contractor's service.

THE CONDITIONS HEREIN BEFORE REFERRED TO

1. Definition of terms/ interpretation:

In construction these conditions, the specification schedule of quantities and contract agreement, the following words shall have the meanings herein assigned to them expect where the subject or context otherwise requires.

- (a) “Employer/ owner / Bank” shall mean” Union Bank of India, Government of India undertaking” having its Central Office annex building at 5-9-11, Pattabhi Bhavan, Saifabad, Hyderabad-500004 and any of its employees representatives authorized on their behalf.
- (b) “Architect / consultant” - shall mean “M/s abhikram-s architects, interior designers, urban planners Valuers , having their Registered office at No. 3-6-134 , Flat No 302,SVC ROYAL DM Apartments,Street No 18,Himayatnagar, Hyderabad-500029 or in the event of his or their easing to be Architect/ Consultant for the purpose of this contract such other person as the Bank shall nominate for the Purpose.
- (c) “Contractors” (in case of partnership) shall mean.....andtrading as partners in the name and style ofand shall include partners for the time being of the said firm and the legal representatives of a deceased partner.
“Contractors” (in case of individuals) shall mean.....andtrading in the name and style ofand shall include his / their heirs, legal representative assigns or successors.
“Contractors” (in case of company) shall mean.....a company incorporated under19.....and having its registered office atand shall include its successors and assigns.
- (d) “Site” shall mean “Work Place located at M. N. 517/B/2, Chota Khantla, Sultan Bazar, Koti, Hyderabad-500004 includes any building and erections thereon and any other land (inclusively), as aforesaid, allotted by the Bank for the contractor’s use.
- (e) Site Engineer / Engineer: The Engineer appointed by the Bank/ Architect/ Consultant for the management of the project.
- (f) “The works” shall mean the work or works to be executed or done under this contract.
- (g) “This Contract” shall mean Articles of Agreement, the special conditions, the general conditions of contract, the appendix, the schedule of quantities and specifications, attached hereto and duly signed.
- (h) “Notice in writing” or written notice shall mean a notice in written, typed or printed characters sent (unless delivered personally or otherwise proved to have been received), by registered post to the last known private or business address or registered office of the addressee and shall be deemed to have been received when in the ordinary course of post, it would have been delivered.
- (i) “Act of Insolvency” shall mean any Act of Insolvency as defined by the Presidency Towns Insolvency Act, or the Provincial Insolvency Act or any amending such original.
- (j) “The Schedule of Quantities” shall mean the schedule of quantities as specified and forming part of this contract.
- (k) “Priced Scheduled of Quantities” shall mean the schedule of quantities duly priced with the accepted quoted rates of the contractor.
- (l) “Net Prices” If in arriving at the contract amount, the contractor shall have added to or deducted from the total of the items in the Tender any sum either as a Item or otherwise, then the net price of any item in the Tender shall be the sum arrived at by adding to or deducting from the actual figure appearing in the Tender as the price of that item a similar Item or proportion of the sum so added or deducted of the sum so added or deducted by the contractor the amount of any Prime Cost items and provisional sums of money shall be deducted from the total amount of the Tender. The expression “net rates” or “net prices”

when used with reference to the contract or accounts shall be held to mean rates or prices so arrived at.

2. SCOPE OF WORK:

The work consists of VRV / VRF AIR CONDITIONING WORKS IN FIRST, SECOND, THIRD, FOURTH AND FIFTH FLOORS AT BANKS KOTI BUILDING KOTI HYDERABAD, TELANGANA STATE.or any other work, etc. as required on site. It includes furnishing all materials, labor, tools and equipment and management necessary for and incidental to the completion of the work. It includes liasoning with Statutory bodies for execution of work & disposal of waste / Mosquito/ noise control, as per the local statutory rules & also all documentation & registration with all statutory bodies, central/ state such as Insurances, Labour commissioner, etc. All work, during its progress and upon completion shall conform to the lines, elevations and grades as shown on the drawings furnished by the employer/ architects. Should any detail essential for efficient completion of the work be omitted from the drawings and specifications it shall be the responsibility of the contractor to inform the Bank/ Consultant and to furnish and install such detail with Bank/ Consultant's concurrence, so that upon completion of the proposed work the same will be acceptable and ready for use.

The term the 'Architects/Consultants' in the said conditions shall mean the said M/s abhikram -s , having their Registered office at No. 3-6-134, Flat No 302, street no 18 , Himayatnagar Hyderabad-500029 or in the event of the said Architect /Consultants ceasing to be the Architect /Consultants for the purpose of this contract for whatever reason, such other person or persons as shall be nominated for that purpose by the Owner/Employer, provided always that no person subsequently appointed to be the Architect /Consultants under this contract shall be entitled to disregard or over rule any decision or direction or approval given or expressed in writing by the Outgoing Architect /Consultants for the time being if the same had been done under instruction from the Bank/ Employer.

3. CONTRACTOR'S RESPONSIBILITY

The Contractor shall carry out and complete the said work in every respect in accordance with this contract and with the directions of and to the satisfaction of Consultant/Bank. The Consultant may in his absolute discretion and in consultation with the Bank (with prior approval from the Bank) and from time to time issue drawings and/or written instruction, details directions and explanations which are hereafter collectively referred to as "Consultant/Bank's Instruction".

In regard to:-

- a. The variations or modifications of the design, quality or quantity of works or the additions or omission or substitution of any work.
- b. Any discrepancy in the drawings or between the schedule of quantities and/or drawings and or drawings and or specification.
- c. The removal from the site of any defective materials brought thereon by the contractor and the substitution of any other materials thereof.
- d. The removal and/or re-execution of any works executed by the contractor.
- e. The dismissal from the works of any person employed thereupon.
- f. The opening up for inspections of any work covered up.
- g. The amending and making good of any defects under clauses 19 hereof and those arising during the maintenance/ defect liability period.

The contractor shall forthwith comply with and duly execute any work comprised in such Consultant/Bank instructions, provided always that the verbal instructions, directions, and explanations given to the contractor or his representative upon the works by the Consultant/Bank shall, if involving a variation, be confirmed in writing by the contractor

within seven days, and if not dissented from in writing within a further seven days by the Consultant, such shall be deemed to be Consultant /Bank instructions within the scope of the Contract.

4. VISIT TO SITE

The contractor shall visit the site and make himself thoroughly acquainted with the local site condition, nature and requirements of the works, facilities of transport condition, effective labor and materials, access and storage for materials and removal of rubbish. The tenderer shall provide in their 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 of 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 or Consultant might be deemed to have reasonably been inferred to be so existing before commencement of work.

5. AGREEMENT

The successful contractor is required to sign agreement as may be drawn up to suit local conditions and shall pay for all stamps and legal expenses, incidental thereto.

6. PERMITS AND LICENSES

Permits and licenses for release of materials which are under Government control will be arranged by the contractor. The Bank will render necessary assistance, sign any forms or applications that may be necessary.

The contractor shall at his own cost arrange for storage shed adequate for taking delivery and storing of the quantity of controlled materials released by the authorities or supplied by the Bank. The costs of storing, transporting, etc. of all materials including those under Government control are to be included by the tenderer in his quoted rates.

The Bank / Consultant shall be indemnified against all Government or legal actions for theft or misuse of any controlled materials in the custody of the contractor.

7. GOVERNMENT AND LOCAL RULES

The contractor shall conform to the provisions of all local Bye-laws and Acts relating to the work and to the Regulations etc. of the Government and Local Authorities and of any company with whose system the structure is proposed to be connected. The contractor shall give all notices required by said Act, Rules, Regulations and Bye-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 license, fees for footpath encroachment and restorations etc. and shall indemnify the Bank against such liabilities and shall defend all actions arising from such claims or liabilities. The contractor shall comply with provisions of all labour legislations and keep the employer saved harmless and indemnified against claims if any from the statutory authorities , workmen and all costs and expenses as may be incurred by the employer in connection with any claim that may be made by any workmen .

8. Rates quoted

The rates quoted in the tender shall be for finished items of works . The rates quoted shall include all the charges required for labour , material , transportation of material and equipment , tools and plants , cleaning of sites during execution of work and to do all the things necessary to provide complete finished items of works consistent with the specifications attached to the tender document . Rates quoted shall include all charges , duties , loyalties etc excluding gst . No extra claim in any case be entertained . The rates shall be firm and shall not be subjected to variations in the cost of materials or due to labour conditions or any other condistions whatsoever .

8. 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 drawings, but the Bank reserves the right to execute only a part or the whole or any excess thereof without assigning any reason therefore. The quantity may vary to any extent and even the same will be omitted. No separate payment/ compensation/ revision in the rates will be entertained.

9. VARIATIONS TO BE APPROVED BY THE BANK/ CONSULTANT

Notwithstanding anything herein contained, the Consultant or his representative shall not, without prior concurrence in writing of the Bank, issue any instructions, verbal or in writing, the Consultant can get the work done upto an amount of Rs.10,000.00 (Rupees Ten thousand only) and all instruction issued to the contractor should forthwith be brought to the notice of the Bank. The contractor shall submit through the Consultant, a statement of variations giving rise quantity and rates duly supported by analysis of rates, vouchers, etc. The rates on scrutiny and final acceptance by the Bank shall form a supplementary tender. The Bank shall not be liable for payment of such variations until these statements are sanctioned by the Bank.

10. DRAWINGS AND SCHEDULE OF QUANTITIES AND AGREEMENT

The contractor on the signing hereof shall be furnished by the Consultant free of cost one copy of each of the said drawings and of the specifications and one copy of all further Drawings issued during the progress of the works. Any further copies of such drawings required by the contractor shall be paid by him. The contractor shall keep one copy of all drawings on the works and the Consultant/ Bank or their representatives shall at all reasonable times have access to the same.

11. CONTRACTOR TO PROVIDE EVERYTHING NECESSARY

The contractor shall provide everything necessary for the proper execution of the works according to the intent and meaning of the Drawings, Schedule of quantities and Specification taken together whether the same may or may not be particularly shown or described therein provided that the same can be reasonably be inferred there from, and if the contractor finds any discrepancies therein, he shall immediately and in writings, 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 of the works at his own cost. The Bank shall on account be responsible for the expenses incurred by the contractor for hired ground or fresh water obtained from elsewhere.

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

11.1.1 The contractor shall supply, fix and maintain at his own cost, for the execution of any work, all tools, tackles, machineries and equipment and for the proper execution and protection of the said work but also for the protection of the of the Bank s property & personnel.

12. AUTHORITIES NOTICES AND PATENTS

The contractor shall confirm to the provisions of any Act of the legislature relating to the works, and to regulations and bye-laws of any authority, and or any water electric supply and other companies and/or authorities with and whose the systems the structures is proposed to be connected, and shall, before making any variations from the drawing or specifications that may be associated to so confirming, give to the Architect written notice, specifying the variations proposed to be made and the reason for making it and apply for instructions thereon. In case the contractor shall not within ten days receive such instructions he shall proceed with the work confirming to the provisions, regulations, or

byelaws in questions, and variations so necessitated shall be dealt with under clause 13 hereof.

The contractor shall bring to the attention of the Consultant/ Bank all notices required by the said Acts, regulations or bye-law to be given to any authority and pay to such authority, or to any public office, all fees that may be properly chargeable in respect of the said work, and lodge the receipt with the Consultant/ Bank.

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

13. CLEARING SITE AND SETTING OUT WORKS

The site shall be cleared of all obstructions, and material rubbish of all kind. The contractor shall set out the works and shall be responsible for the true and perfect setting out of the work and for the correctness of the positions, dimensions, levels and the alignment of all the parts thereof. If at any time any error in this respect shall appear during the progress of any part of work or within the period of one year from the completion of the works, the contractor shall at his own expenses rectify such error to the satisfaction of the Consultant / Bank.

14. CONTRACTOR IMMEDIATELY TO REMOVE ALL OFFENSIVE MATTERS

All the rates quoted are inclusive of removal of rubbish / debris collected during the progress of work, rejected material and clearance of site before and after the work is completed. Not more than one truckload shall be stored that to for not more than 3 days. The contractor shall arrange to remove the same immediately. If the contractor is failing to remove the same and the expenses shall be recovered from the contractor and he will not dispute for the expenses so incurred.

15. MATERIALS, WORKMANSHIP, SAMPLES, TESTING OF MATERIALS:

All the works specified and provided for in the specifications 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 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.

The contractor shall have to carry out test on materials and workmanship in approved materials testing laboratories or as prescribed by the Bank/ Consultant at own cost to prove the materials quality and test sample, confirm to the relevant I.S. Standard or as specified in the specifications. The necessary charges for transporting testing etc. shall have to borne by the contractors. No extra payment on this account should in any case be entertained.

All the materials (except where otherwise described) store and equipment required for the full performance of the work under the contract must be provided through normal channels and must include charges for import duties, sales tax, octroi and other charges and must be the best of their kind available and the contractors/must be entirely responsible for the proper and efficient carrying out the work. The work must be done in the best workman like manner. Samples of all materials to be used must be submitted to the Bank/ Consultant when so directed by the Engineer/ Consultant and written approval from Bank/ Consultant must be obtained prior to placement of order.

16. INCLEMENT WEATHER:

Should the work be suspended by reason of rain, strike, lockouts or any other cause, the contractor shall take all precautions 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 window, and any other requisite protection for the execution of the work whether by himself or special tradesmen or sub-contractor and any damage caused must be made good by the contractor at his own expenses.

17. MATERIALS AND WORKMANSHIP TO CONFORM TO DESCRIPTIONS:

All materials and workmanship shall so far as procurable be of the respective kinds described in the schedule of quantities and/ or specifications and in accordance with the Consultant's instructions, and the contractor shall upon the request of the Consultant furnish him with all invoices, accounts, receipts and other vouchers to prove that the materials comply therewith. The contractor shall at his own cost arrange for and/ or carry out any test of any materials which the architects may require from Government approved laboratories.

18. CONTRACTOR'S SUPERINTENDENCE & REPRESENTATIVE ON THE WORKS:

The contractor shall give all the necessary personal superintendence during the execution of the works, and as long thereafter as the Bank/ Consultant may consider necessary until the expiration of the defect's liability period stated in the Appendix hereto. The contractor shall also during the execution of works maintain an experienced qualified supervisor as required who shall be in constantly attendance at work while the men are at work. Any directions, explanations, instructions, or notices given by the Bank/ Consultant to such representative shall be held to be given to the contractor. For non-compliance an amount of Rs.15,000/- pm shall be deducted from the contractor for the period required if supervisor is not provided. However, deduction of payment shall not exonerate contractor for his responsibility for executing quality work.

19. DEPLOYMENT OF LABOURS:

No labourer below the age of eighteen years shall be employed on the work. Any labourer 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.

20. FACILITIES TO BE PROVIDED TO WORKERS:

The contractor shall comply at his own cost with the 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 times for the use of men engaged on the works and shall remove and clear away the same on completion of the works. Adequate precautions shall be taken by the contractor to prevent nuisance of any kind on the works or the lands adjoining the same.

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

a. DISMISSAL OF WORKMEN:

The contractor shall at the request of the Bank/ Consultant immediately dismiss from the works, any person employed thereon by him who may in the opinion of the Bank/ Consultant incompetent or misconduct himself and such person shall not be engaged again. Such discharges shall not be the basis of any claim for compensation or damages against the Bank or any of their officer or employee.

i. ACCESS TO WORK:

The Bank/ Consultant and their responsible representative shall at all reasonable times have free access to the works 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 the contractor shall give every facility to the Bank, the Consultant and their representative necessary for inspection and examination and test of the materials and the workmanship. No persons not authorized by the Bank or the Consultant except the representatives of Public Authorities shall be allowed on the works at any time.

ii. **ASSIGNMENT/ SUB-LETTING:**

The whole of the works included in the contract shall be executed by the contractor and the contractor shall not directly or indirectly transfer, assign, or under-let the contract or any part share there of or any interest therein without the prior written consent of the Bank and no undertaking shall relive the contractor of the full and entire responsibility of the contract or from active superintendence of works during their progress. Central Govt./ State Govt. companies shall not be allowed to sublet the work on back to back basis/ labor basis without approval from the Bank. In case, in case contractor sub-let the work, the Bank will be entitled to deduct 10% of cost of work executed besides initiating other measures provided in the contract.

iii. **VARIATIONS:**

No alterations, omissions or variations shall vitiate this contract, but in case the Architect thinks proper at any time during the progress of the works to make any alterations in, or additions to or omissions from, the work or any alteration in the kind or quality of materials to be use therein and shall give notice thereof in writing under his hand to the contractor, the contractor shall alter, add to, or omit from, as the case may be, in accordance with such notice, but the contractor shall not do any work extra to or make any alterations or additions to or omissions from the works or any deviations from any of the provisions of the contract, stipulation specifications or contract drawings without the previous consent in writing of the consultant /Architect / Bank and the values of such extras, alternations, additions or omissions shall in all cases be determine by the Consultant with the prior approval in writing of the Bank in accordance with the provision of the Clause hereof, and the same shall be added to, or deducted from the contract amount, as the case may be accordingly.

iv. **SCHEDULE OF QUANTITIES:**

The Schedule of quantities, unless otherwise stated shall be deemed to have been prepared in accordance with the standard method of quantity measurement.

Any error in description or in quantity or in omission of items from the Schedule of quantities shall not vitiate this contract but shall rectified and the value thereof shall be added to or deducted, from the contract amount (as the case may be), provided that no rectification of errors, if any, shall be allowed in the contractor's Schedule of rates.

The contractor shall be deemed to have satisfied himself before tendering as to the correctness and sufficiency of this tender for the works and the prices stated in the Schedule or quantities and or the schedule of rates and prices which rates and prices shall cover all his obligations under the contract and all matters and things necessary for the proper completion of works.

The quantities of work may vary to any extent or may be omitted; the contractor cannot claim loss of profit/ overhead on this account.

26. MEASUREMENT OF WORKS:

26.1 The Consultant may from time to time intimate to the contractor and the Bank that he requires works to be measured, and the contractor shall forth with attend or send a qualified agent to assist the Consultant in taking such measurements and calculations and to furnish all the particulars or to give all assistance required by any of them.

26.2 The Engineer will take measurement of the work jointly with the contractor and enter the same in measurement books. Based on these measurements the contractor will raise the

bill as per the prescribed format. Consultant to verify the bill/ measurement and issue certificate stating that the work completed is as per the specifications and the measurement claimed for the works are actually executed at site. This certificate shall be issued within 14 days after bill submission by the Contractor. The Bank will release bill amount within 21 days. If for some reason checking of the bill/ measurement is not completed, 75% of the bill amount at least shall be released within 21 days and the balance within 30 days.

- 26.3 Should the contractor not attend or neglect or omit to send such agent then the measurement taken by the Architect or a person approved by him shall be final and binding on the contractors.
- 26.4 The contractor or his also supply without charge the requisite number of persons with means and materials necessary for the purpose of measurements or examinations at any time and from time to time of the work or counting weighting of the materials, etc.
- 26.5 All authorized extra works, omissions and all variations made without the Consultant's knowledge, if subsequently sanctioned by him in writing (with the prior approval in writing of the Bank) shall be included in such measurement.
- 26.6 Measurements shall be recorded as per IS 1200 mode measurement and in metric system. Measurement shall be recorded in 100 pages bounded measurement book to be supplied by Union Bank of India. The M.B. shall be kept in the custody of the consultant / Bank.

1. PROCEDURE FOR MEASUREMENT AND BILLING OF WORK IN PROGRESS:

- 27.1 The Contractors will have to keep the materials at Site under their safe custody and at their risk and cost. The Bank is not responsible for damages and losses of such materials brought at site.
- 27.2 **Running Account Payments to be regarded as Advances:**

All running account 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 accepted 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 this respect, or the accruing of any claim, nor shall it conclude, determine or effect in any way the powers of the Bank/ consultant under these conditions or any of them as to the powers of the Bank/ consultant 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/affect the contract. The final bill shall be submitted by the contractor within one month of the date fixed for completion of the work; otherwise the Consultant/ Engineer-in-charge's certificate of the measurement and of the total amount payable for the work accordingly shall be final and binding on all parties. Interim Bill value to be minimum of **Rs.30.00 Lacs**.

2. COMPLETION CERTIFICATE:

28.1 APPLICATION FOR COMPLETION CERTIFICATE

The Consultant /Engineer-In-Charge shall normally issue to the contractor the completion certificate within one month after receiving, an application thereof from the contractor and after verifying from the completion documents and satisfying himself that the work has been completed in accordance with and as set out in the construction and erection drawing and contract documents.

The contractor, after obtaining the completion certificate, is eligible to present the final bill for the work executed by him under the terms of contract.

28.2 Completion Certificate

Within one month of the completion of the work in all respects, the Contractor shall be furnished with a certificate by the Consultant/ Engineer-In-Charge of such completion but no certificate shall be given nor shall the work be deemed to have been completed until all scaffolding, surplus materials and rubbish is cleared of the site completely. The work will

not be considered as complete and taken over by the Bank, until all the temporary works, labor etc., are removed and the works site cleared to the satisfaction of the Consultant/ Engineer.

If the Contractor shall fail to comply with the requirements of this clause on or before the date fixed for the completion of the work, the Consultant/ Engineer-In-Charge may at the expenses of the contractor remove such scaffolding, surplus materials and rubbish and dispose off the same as he thinks fit and clean up the site and the contractor shall forthwith pay the employer for all expenses so incurred and shall have no claim in respect of any such scaffolding or surplus materials as aforesaid except of any sum actually realized by the sale thereof.

28.3 CERTIFICATE (to be issued by the consultant/ engineer)

It is certified that various items of works claimed in the RA Bill by Contractor has been completed to the extent claimed and at appropriate rates and that the items are in accordance with and fully confirming to he standard and/or prescribed specifications and drawings. Quality and rates verified. The material supplied and work done conform tender specifications. We further certify that we have checked the measurement to the extent of 100 per cent of each item claimed in this bill. As net amount of Rs..... (Rupees) is recommended to be paid to the contractor making the total upto date payment of Rs.....

(Rs.)

Quality and rates verified. The material supplied and work done confirm with the tender specifications.

DATE :

SITE ENGINEER / CONSULTANT

The above certification shall be endorsed in the relevant Measurement Books also by the Consultant.

28.4 FORMAT FOR RUNNING BILL

ON LETTER HEAD OF CONTRACTOR

Running Bill No.

Tender Amount Rs.

Value of work done Rs.

Less rebate (-) Rs.

Net Value of work done Rs.

Extra variation items after settlement @100% Rs.

Extra variation items without settlement @75% Rs.

Total

Total payable Rs.

Deductions

1. Recovery of advance if any Rs.

2. Income-tax Rs.

3. Any other Rs.

4. Total bill paid till last bill Rs.

Total deductions Rs. Rs.

Net payable Rs.

Amount certified for payment Rs.

Note : This page shall be signed and stamped by the Site Engineer, Contractor and Project Architect.

v. **FORMAT FOR RUNNING BILL (To be submitted by the contractor)**

I	Name of the Contractor / Agency	:	
II	Name of the Work	:	
III	Sr.No. of the Bill	:	
IV	Sr.No. of the Previous Bill	:	
V	Reference to Agreement No.	:	
VI	Date of written order to commence	:	
VII	Date of Completion as per Agreement	:	
VIII	Date of Measurements	:	
XI	Present status of work	:	

Sno.	Items Description	Unit	Rate	Qty. as per measurement	Tender Amount Rs.
1	2	3	4	5	6

Up to previous RA Bill		Up to date gross		Present bill		remark
Qty	Amt.	Qty.	Amt.	Qty.	Amt.	
7	8	9	10	11	12	13

Note :

- If part rate is allowed for any item, it should be indicated with reasons for the allowing such a rate.
- If adhoc payment is made, it should be mentioned specially.

29. Any representative of the Architect/ Consultant, or the Bank shall have power to give notice to the contractor or to his representative, 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 Architect is obtained. The work will be from time to time be examined by the Architect/ the Bank's Engineer or the Architect's representative, but such examination shall not in any way exonerate the contractor from the obligations to remedy any defects which may be found to exist at any stage of the works or after the same is complete. Subject to the limitations of this clause, the contractor shall take instructions only from the Architect/ Bank.

30. DUTIES OF CONTRACTOR

- i. To make a thorough study of contract documents, Architectural/Structural drawings and other details so as to bring out ambiguities/discrepancies between them and to obtain clarification from the Competent Authority well in time to avoid delays.
- ii. To render a certificate to the Competent Authority to the effect that he has studied the contract documents, drawings and specifications.
- iii. To take charge of objects of value and antiquity found on site or in excavations, immediately, after their discovery, to hold them in safe custody and to hand them over to the Competent Authority of the Bank for further action.
- iv. To ensure that the quality of materials and workmanship as laid down in the contract is maintained and the accuracy of dimension shown on drawings is attained in the construction/ work.
- v. To watch the validity of the building permission issued by the Local Authority and to ensure that the revalidation, if necessary, is obtained well in time.
- vi. To arrange periodical reconciliation of materials and work.
- vii. To maintain the undernoted records at the site of work, in addition to normal routine requirements of an office:
 - a. Daily Progress Record
 - b. Work Site Order Book.
 - c. Instruction by Bank's Officers.
 - d. Test Registers of other materials/fittings, fixtures, equipment's as stipulated in the tender.
 - e. Register of Drawings and Working Details.
 - f. Log Book of Defects.
 - g. The Site Engineer should maintain in a Hindrance Register giving details of commencement and removal of each hindrance.
 - h. Dismantled Materials Account Register.
 - i. Supply and consumption register of scarce/costly materials.
 - j. Record of materials used/received: Day to day record of materials used/received shall be entered in the register and signed by contractor's representative at site.
- viii. To record measurements of completed work jointly and to process them in running account bills.
- ix. To submit to the Competent Authority the Progress Report fortnightly.
- x. To watch that the concerned contract does not lapse for want of extension of time. Therefore, to keep it alive and in operation from point of consideration that "Time is the essence of contract".
- xi. To ensure that progress on every contract is in accordance with the appropriate stage of its Time and Progress Chart.
- xii. To submit the final summary of costs for the project to the Competent Authority.
- xiii. To submit the Competent Authority authentic information on and the under noted records pertaining to the completed work in order to enable the Competent Authority to finalize them in the due course:
 - a) Record i.e. as completed drawings.
 - b) Record of Standard Measurements for periodical services.
 - c) Inventory of fittings and fixtures.

To hand over to the Competent Authority a “first draft” of “A Note of Comprehensive Information to the User” containing detailed instructions on how to use and maintain the completed building to the best advantage of the Bank.

31. PRICES FOR EXTRAS ETC. ASCERTAINMENT OF NON-TENDER ITEMS

The contractor may, when authorized, and shall, when directed in written by the Architect / Consultant with the approval of the Bank, add to, omit from, or vary the works shown upon the drawings, or described in the specification or included in the schedule of quantities, but contractor shall make no addition, omission or variation without such authorization or direction. A verbal authority or direction by the Architect / Consultant shall, if confirmed by them in written seven days, be deemed to have been given in writing. Any such extra is herein referred to as authorized extra and shall be made in accordance with the following provisions.

- (a) (i) The net rates or prices in the original tender shall determine the valuations of the extra work where such extra work is of similar character and executed under similar conditions as the work priced therein.
 (ii) Rates for all items, wherever possible, should be derived out of the rates given in the priced schedule of quantities.
- (b) The net prices of the original tender shall determine the value of the items omitted, provided if omissions vary the conditions under which any remaining items of works are carried out, the prices for the same shall be valued under sub-clause C hereof.
- (c) Where the extra works are not of similar character and /or executed under similar conditions as aforesaid or where the omissions vary the conditions under which any remaining items of works are carried out or if the amount of the whole of the contract works or to any part thereof shall be such that in the opinion of the Architect the net rate or price contained in the priced schedule of quantities or tender or for any item of the works involves loss or expense beyond that reasonably contemplated by the contractor or is by reason unreasonable or inapplicable, the Architect shall fix such other rate or price as in the circumstances he shall feel reasonable and proper, with the prior approval in writing of the employer.
- (d) Where extra work cannot be properly measured or valued the contractor shall be allowed days work prices as the priced schedule of quantities or, if not so stated, then in accordance with the local day work rates and wages for the district; provided that in either case vouchers specifying the daily time (and if required by the Architect, the workman’s name) and materials employed to be delivered for verification to the Architect, or his representative at to the Architect or his representative at or before the end of the week following that in which the work has been executed.

Actual cost of materials	.....	Rs.
Add for Labour charges	.....	Rs.
Add for Taxes, Transportation, If any.	.....	Rs.
Add for Wastage of Materials (Upper Limit 5% wherever applicable)	.....	Rs.
Add for water and electricity Charges if any required, upper limit 2% of basic cost of materials.	.....	Rs.
Add for 15% towards contractor’s overheads and profit.	.....	Rs.
Final rate arrived.		Rs.

32. UNFIXED MATERIALS WHEN TAKEN INTO ACCOUNT TO BE THE PROPERTY OF THE BANK

Where in any certificate (of which the contractor has received payment), the Architect has included the value of any unfixed materials intended for and/or placed on adjacent to the works, such materials shall become the property of the Bank and they shall not be removed

except for use upon the works, without the written authority of the Architect/Bank. The contractor shall be liable for any loss of or damages to such materials.

33. REMOVAL OF IMPROPER WORKS

The Architect/Bank shall, during the progress of the works, 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 order, of any materials which in the opinion of the Architect/Bank are not in accordance with the specifications or the instructions, the substitution of proper materials, the removal and proper re-execution of any work executed with materials or workmanship not in accordance with the drawings and specification instruction and the contractor shall forthwith carry out such order at his own cost. In case of default on the part of the contractor to carry such order, the Bank shall have the power to employ and pay other persons to carry out the same and all expenses consequent thereon, or incidental thereto, shall be deducted by the Bank from any money due or that may become due, to the contractor.

No certificate, which may have been issued by the Architect, shall relieve the contractor from his liability in respect of unsound work of bad materials.

34. DEFECTS AFTER COMPLETION

The contractor shall make good at his own cost and to the satisfactions of the Bank all defects, shrinkage, settlements or other faults, which may appear within 12 months after completion of the work. 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 amount 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 that from the contractor from the amount retained as Security money together with any expenses the Bank may have incurred in connection therewith.

35. CONCEALED WORK:

The contractor shall give due notice to the Bank/ architects whenever any work is to be buried in the earth, concrete or in the bodies of walls or furniture wood, otherwise becoming 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 opinion of the Bank/ architect be either opened up for measurement at the contractor's expense or no payment may be made for such materials. Should any dispute or differences arise after the execution of any work as to measurements etc., or other matters which cannot be conveniently tested or checked, the notes of the employer/ architects shall be accepted as correct and binding on the contractor.

36. CERTIFICATE OF VIRTUAL COMPLETION & DEFECTS LIABILITY PERIOD

The work shall not be considered as completed until the Architect has certified in writing that they have been virtually completed. The defects Liability Period shall commence from the date indicated in the virtual completion certificate issued by the Architect.

37. OTHER PERSONS ENGAGED BY THE BANK

The Bank reserves the right to execute any part of the work included in this contract by other agency or persons and contractor shall allow all reasonable facilities and use of his scaffolding for the execution of such work. The main contractor shall extend all co-operations in this regard.

38. INSURANCE

a. IN RESPECT OF DAMAGE TO PERSONS AND PROPERTY

- (i) The contractor shall be responsible for all injury to the work or to persons, animals or things, and for all damages to the structural and / or decorative part of the property which may arise from the operation or neglect of himself or of any nominated sub-contractor or any of his / sub-contractor's employee, whether such damage/ injury arises from carelessness, accident or any other cause whatsoever in any way connected in the carrying out of this contract. This clause shall be held to include inter alias, any damage to buildings, whether immediately adjacent or otherwise, and any damage to the roads, streets, foot-paths, bridge or ways as well as damage caused to the building and work forming the subject of this contract by rain, wind or other inclement of the weather. The contractor shall indemnify the Bank and hold it harmless in respect of all and any expense arising from such injury or damage to persons or property as aforesaid and also in respect of any claim made in respect of injury and damage under any Act of any Legislature or otherwise and also in respect of any award of compensation or damage consequent upon such claims.
- (ii) The contractor shall reinstate all damage of every sort mentioned in this clause, so as to deliver up the whole of the contract works complete and perfect in every respect and so as to make good or otherwise satisfy all claims for damage to the property or third parties.
- (iii) The contractor shall indemnify the Bank against all claims which may be made against the Bank by any member of the Public or third party in respect of anything which may arise in respect of the works or in consequence thereof and shall at his own expense arrange to effect and maintain, until the virtual completion of the contract, with an approved office, a Policy of Insurance in the name of the Bank and the contractor against such risks and deposit such policies with the Bank from time to time during the currency of this contract. The contractor will also similarly indemnify the Bank of all claims which may be made upon the Bank whether under the Workmen's Compensation Act or any other statute in force during the currency of this contract or at common law in respect of any employee of the contractor or any sub-contractor and shall at his own expense effect and maintain, until the virtual completion of the contract, with an approved office, a Policy of Insurance in the joint name of the Bank and the Contractor against such risks and deposit such policy or policies with the Bank from time to time during the currency of the contract.
- (iv) The contractor shall be responsible for any liability which may be excluded from the Insurance Policies above referred to and also for all other damages to any person animal or property arising out of incidental or defective carry in out of this contract. He shall also indemnify the Bank in respect of any cost, charges or expenses arising out of claims or proceeding and also in respect of any award of composition and damages arising there from.
- (v) The Bank shall be entitled to deduct the amount of any damage, compensation, cost, charges and expenses arising from or accruing from, or in respect of, any such claims or damage from any or all sums due or to become due to the contractor without prejudice to the Bank's other rights in respect thereof.

b. FIRE INSURANCE

- (i) The Contractor shall, within fourteen days from the date of commencement of works, insure the works at his cost and keep them insured until the virtual completion of the contract, against loss or damage by fire and/ or earthquake, flood with an office to be approved by the Architect in the joint name of the Bank and the Contractor (the name of the former being placed first in the policy), for the contract amount only. The Contractor shall deposit the policy and receipts for the premium with the owner within 21 days from the date of issue of work order, unless otherwise instructed by commencement of the works, unless otherwise instructed by the Architect. In default of the Contractor insuring as provided above, the Bank or the Architect on his behalf, may so insure the works and may deduct the premium paid from any money due or which may become due to the Contractor without prejudice to the other rights of the Bank in respect of such default. In case it becomes necessary to suspend the works, the Contractor shall as soon as the claim under the policy is settled, or work reinstated by the Insurance office should they elect to do so, proceed with all due diligence with the

completion of the works in the same manner as though the incident had not occurred and in all respects under the same conditions of the Contract. The contractor in case of rebuilding or reinstatement after fire, shall be entitled to such extension of time for completion as the Bank/ Architect deemed fit.

- (ii) The amount so due as aforesaid shall be the total value of the works duly executed and of the contract materials and goods delivered upon the site for use in works upto and including a date not more than seven days prior to the date of the said Certificate less the amount to be retained by the Employer (as hereinafter provided) and less any installments previously paid under this clause. Provided that such Certificate shall only include the value of the said materials and goods as and from time to time as they are reasonably, properly and not prematurely brought upon the site and then only if properly stored and/or protected against weather.
- d) The Contractors will have to take out following Insurance Policies:
 - 1) Contractors All Risks Insurance Policy to cover-
 - Earthquake- Fire & Shock
 - Landslide/Rockslide/Subsidence.
 - Flood/Inundations.
 - Storm/Tempest/Hurricanes/Typhoon /Cyclone Collapse.
 - Theft/Burglary.
 - Damage to material brought at Site and to be subsequently used in the work.
 - 2) Third party Insurance Policy
 - a. For accidental loss or damage caused to the property of other persons.
 - b. For fatal or non-fatal injury to any person other than insured own employees or work men of employees of the owner of the works any other construction work thereon, or member of the Insured's family or of any of the aforesaid; directly consequent upon of solely due to the construction of any property described in the Schedule.
 - 3) Workmen's Compensation Insurance.

39. ACCOUNTS RECEIPTS & VOUCHERS:

The contractor shall, upon the request of the employer furnish them with all the invoices, accounts, receipts and other vouchers that they may require in connection with the works 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 material 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.

40. LIQUIDATED DAMAGES/ DAMAGES FOR NON-COMPLETION

If the Contractor fails to complete the works by the date stated in the Appendix or within any extended time and the Architect certifies in writing that in his opinion, the same ought reasonably to have been completed, the Contractor shall pay the Bank liquidated damages @ 1% of the contract amount per week of delay subject to maximum deduction of 10 % of the contract amount.

41. TOOLS, STORAGE OF MATERIALS, PROTECTIVE WORKS AND SITE OFFICE REQUIREMENTS

- i) 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 works and make good all work disturbed.

- ii) All drawings maintained on the site are to be carefully mounted on Boards of appropriate size and covered with a coat of approved varnish. They are to be protected from ravages of termites, ants and other insects.
- lii) The contractor shall provide at his own cost all artificial light required for the work and to enable other contractors and sub-contractors to complete the work within the specified time.
- iv) The washrooms assigned for use of contractor workers and field staff shall be kept in a clean and sanitary condition to the satisfaction of the Public Health Authorities. Any damages shall be made good at contractors cost and handed over back after work completion.
- vi) Every precaution shall be taken by the contractor to prevent the breeding of mosquitoes on the works during the construction and all receptacles, cisterns, water tanks, etc., used for the storage of water must be suitably protected against breeding of mosquitoes. The contractor shall indemnify the Employer against any breach of rules in respect of anti-malarial measures.
- vi) 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.

42. 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 Sundays and other holidays.

Contractor shall indemnify the Bank against any possible damage to the building, roads or members of the public in course 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 adoption the same as may be required and removing on completion of the works and making good all works 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 same on completion.

Tools: Theodolite levels, prismatic compass, chain, steel and metallic taps and all other surveying instruments found necessary on the works shall be provided by the contractor for the due performance of this contract as instructed by the site engineer. 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 mistaries and the supervisors on the works shall carry with them always a one meter or two meter steel tape, a measuring tape of 30 meters, a spirit level, a plum bob and a square and shall check the work to see that the work is being done according to the drawing and specifications. The Site Engineer will use any or all measuring instruments or tools belonging to the contractors as he chooses for checking the works 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.

43. DATE OF COMMENCEMENT & COMPLETION

The Contractor shall be allowed admittance to the Site on the "Date of Commencement" stated in the Appendix hereto, or such later date as may be specified by the Architect / Consultant and he shall there upon and forthwith begin the works and shall regularly proceed with and complete the same (except the painting or other decorative works the Architect / Consultant may desire to delay) on or before the "Date of Completion" stated in the Appendix subject nevertheless to the provision for extension of time hereinafter

contained. As the work is to be carried out in a running office, the contractor should take care so as not to disturb the day to day functioning of the office & should properly cordon off the section where the work is being carried out from the working section.

44. TIME OF COMPLETION, EXTENSION OF TIME & PROGRESS CHART

- (i) Time of completion: The entire work is to be completed in all respects within the stipulated period i.e. **180 days** from the date of issuance of work order or handing over the site whichever is later. The work shall deem to be commenced within 10 days from the date of acceptance of work order or date of handing over of 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 / Architects have certified in writing that this has been completed and the Defects Liability Period shall commence from the date of such certificate.
- (ii) Extension of time: If in the opinion of the Architect / Consultant the work has been delayed
- (a) By force majeure; or
 - (b) By reason of any exceptionally inclement weather or
 - (c) By reason of proceedings taken or threatened by or dispute with adjoining or neighboring Owners or public authorities arising otherwise than through the Contractors own default or
 - (d) By the works or delay or the other Contractors or tradesmen engaged or nominated by the Bank or the Architect and not referred to in the Schedule of Quantities and/or specification or
 - (e) By reasons of the Architect's instructions as per clause 2 hereof or
 - (f) By reason of any combination of workmen or strike or lock-out affecting any of the building trades or
 - (g) in consequence of the Contractor not having received in due time necessary instructions from the Architect for which he shall specifically applied in writing or
 - (h) From other cause which the Bank may consider as beyond the control of the Contractor or
- (iii) In the event, the value of work exceed the value of the Priced Schedule of Quantities owing to variation, the architect may with the previous approval in writing of the Bank make a fair and reasonable extension of time for the completion of the Contract works. In case of such strike or lockout, the Contractor shall as soon as give written notice thereof to the Architect / Consultant, but the Contractor nevertheless constantly use his endeavor to prevent delay and shall do all that may be reasonably required to the satisfaction of the Architect/Bank to proceed with the work and on his doing so that it will be ground of consideration by the Bank 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 an extension being granted, determine and declare the final completion date. The provision in clause with respect to payment of liquidated damages shall, in such case, be read and construed as if the extended date fixed by the Bank were substituted for and the damage shall be deducted accordingly.
- (iv) **PROGRESS OF WORK:** During the period of work, 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 / Architects. Contractor should also include planning for procurement of scare material well in advance and reflect the same in the Programme Chart so that there is no delay in completion of the project.

45. FAILURE BY CONTRACTOR TO COMPLY WITH ARCHITECT/CONSULTANT'S INSTRUCTION.

If the Contractor after receipt of written notice from the Architect / Consultant requiring compliance within ten days fails to comply with such further drawings and/or Architect's instructions, the Bank may employ and pay other persons to execute any such work whatsoever the may be necessary to give effect thereto, and all costs incurred in connection therewith shall be recoverable from the Contractor by the Bank on the Certificate of the Architect / Consultant as a debt or may be deducted by him from any moneys due to the Contractor.

46. Idle labor:

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

47. 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 employer shall neglect or fail to proceed with 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 to 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 the site of the works 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 fails to start the work within seven days after such notice has been given to proceed with the works as therein prescribed, the employer may proceed as provided in clause Termination of Contract by employer.

48. TERMINATION OF CONTRACT BY THE BANK

If the Contractor being an individual or a Firm, commits any "act of insolvency" or shall be adjudged an Insolvent or being an Incorporate company, shall have an order for supervision of the court and the official Assignee or the Liquidator in such acts of insolvency and winding up, as the case may be, shall be unable within seven days after notice to him requiring him to do so, to show the reasonable satisfaction of the Architect 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 or other process of court attaching property to be issued to the Contractor.

OR shall suffer any payment under this Contract to be attached by or on behalf of any of the creditors of the Contractors.

OR shall assign or sublet this Contract without the consent in writing of the Bank first obtained.

OR shall charge or encumber this Contract or any payment due or which may become due to the Contractor hereunder.

OR if the architect / consultant shall certify in writing to the Bank that the contractor:

- i. Has abandoned the Contract, or
- ii. Has failed to commence the works, or has without any lawful excuse under these conditions suspended the progress of the works for fourteen days after receiving from the Architect notice to proceed, or
- iii. Has failed to proceed with the works with such due diligence and failed to make such due progress as would enable the works to be completed within the time agreed upon, or
- iv. Has failed to remove materials from the Site or to pull down and replace work within seven days after receiving from the architect written notice that the said materials or work were condemned and rejected by the Architect under these conditions or,

- v. 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 to observe or perform the same.

Then and in any of the said cases the Bank may, notwithstanding any previous waiver, after giving seven days notice in writing to the Contractor, determine the Contract but without thereby affecting the powers of the Architect/Bank or obligations and liabilities of the Contractor, the whole of which shall continue in force as fully as if the contract has not been so determined, and as if the work subsequently executed had been executed by or on behalf of the Contractor, And further, the Bank by his agent or servants may enter upon and take possession of the work and all plant, tools, scaffoldings, shed, machinery, steam and other power utensils and materials lying upon the premises or on the adjoining land or roads and use 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 works or by the employing any other contractor or person or persons to complete the works 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 person or persons employed for completing or finishing or using the materials and plant for the work. When the work shall be completed or as soon as thereafter as convenient the Architect shall give a notice to the Contractor to remove his surplus materials and plant, and should the Contractor fail to do so within the period of fourteen days after receipt thereof by him, the Bank may sell the same by public auction, and give credit to the Contractor for the net amount realized. The architect shall thereafter ascertain and certify in writing under his hand what (if anything) shall be due or payable to, or by the employer, for the value of the said plant and materials so taken possession of by the Bank and the expense or loss which the Bank shall have been put to in procuring the works to be completed and the amount, if any, owing to the Contractor and the amount, which shall thereupon be paid by the Bank to the Contractor or by the Contractor to the Bank, as the case may be and the certificate of the architect shall be final and conclusive between the parties.

49. Certificates & payments:

The Contractor shall be paid by the Bank from time to time by installments under Interim certificates to be issued the Architect / Consultant to the Contractor on account of the works executed when in the opinion of the Architect, work to the approximate value named in the appendix as value of work for Interim Certificates (or less at the reasonable discretion of the Architect / Consultant has been executed in Accordance with this contract.. The Architect / Consultant may in his discretion include the Interim Certificate, such amount, as he may consider proper on accounts of the works which have been virtually completed and the Architect/ Consultant shall have certified in writing that they have been completed, the contractor shall be paid by the Bank in accordance with the certificate to be issued by the Architect / Consultant the sum of money named in the Appendix "Installment after virtual completion" being a part of the said Total Retention Money. And the contractor shall be entitled to the payment of the Final Balance in accordance with the Final Certificate to be issued in writing by the Architect at the expiration of the period referred to as "The Defects Liability Period" in the appendix hereto from the date of virtual completion, or as soon after the expiration of such period as the works shall be finally completed and all defects made good according to the true intent and meaning and hereof whichever shall last happen, provided always that the issue of the Architect / Consultant of any certificate during the progress of the works or at or after the completion shall not relieve the contractor from his liability under clause 2 and 20 nor relieve the Contractor from his liability in case of fraud, dishonesty or fraudulent concealment relating to the works or materials or to any matter dealt with in the certificate, and in case of all the defects and insufficiencies in the works or materials which is a reasonable examination would not have disclosed. No certificate of the Architect shall of itself be conclusive evidence that any works or materials to which it relates are in accordance with the contract, neither will the contractors have a claim for any amounts which the Architect / Consultant might have certified in any interim bill and paid by the

Bank and which might subsequently be discovered as not payable and in this respect the Bank's decision shall be final and binding.

The Architect/ Consultant shall have power to withhold any Certificate if the works or any parts thereof are not being carried out to his satisfaction.

The Architect/ Consultant may by any certificate make any correction in any previous certificate, which shall have been issued by him.

No certificate of payment shall be issued by architect if the contractor fails to insure the works and keep them insured till the issue of Virtual completion certificate.

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 power of the Bank under these conditions or any of terms as to the final settlement and adjustment of the accounts or otherwise or in any other way vary or affect the contract.

50. EXCEPTED MATTERS / MATTERS TO BE FINALLY DECIDED BY THE BANK:

The decisions, opinion, direction, certificate with respect to all or any of the matters under this tender shall be final and conclusive and binding on the contractor and shall be without appeal. Any other decision, opinion, direction, certificate or valuation of the architect or any refusal of the architect to give any of the same, shall be subject to the right of arbitration and review. The Architect/ Consultant to give recommendations/ opinion in respect of interpreting the various clauses. However, the decision from the competent authority of the Bank shall be final and binding.

51. SETTLEMENT OF DISPUTES BY ARBITRATION

Wherever, in any of the documents forming part of the Contract, the Bank has been vested with the final powers, his decision, opinion, certificate or any other discretion shall be final conclusive and binding on the contractor and shall be without appeal. All other matters shall be subject to the right of arbitration.

All disputes or differences of any kind whatsoever save and except matters referred to in clause 50 arising out of or in connection with the Contract, whether during the progress of Work or after Completion and shall after written notice by either party to the contract to the other of them and to the Bank hereinafter mentioned be referred for adjudication to two Arbitrator, one each to be nominated by the Contractor and the Bank, who shall thereafter appoint an Umpire. The provisions of Indian Arbitration and Conciliation Act 1996 shall apply for the purposes.

The Work under the Contract shall, however, continue during the arbitration proceedings and no payment due or payable to the Contractor shall be withheld on account of such proceedings.

The Arbitrator shall be deemed to have entered on the reference on the date he issued notice to both the parties fixing the date of the first hearing.

The Arbitrator may from time to time, with the consent of the parties, enlarge the time for making and publishing the award.

The Arbitrator shall give a separate award in respect of each dispute or difference referred to him. The Arbitrator shall decide each dispute in accordance with the terms of the contract and give a reasoned award. The venue of 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 who may direct to and by whom and in what manner, such costs or any part thereof shall be paid and may fix or settle and

amount of costs to be so paid.

The award of the Arbitrator shall be final and binding on both the parties.

Subject to aforesaid the provisions of the Arbitration & Conciliation Act 1996 or any statutory modification or re-enactment thereof and the rules made there under, and for the time being in force, shall apply to the arbitration proceeding under this clause.

The Bank and the Contractor hereby also agree that arbitration under clause shall be a condition precedent to any right to action under the contract with regard to the matters hereby expressly agreed to be so referred to arbitration.

The Bank and the contractor hereby also agree that arbitration under clause shall be a condition precedent to any right to action under the contract with regard to the matters hereby expressly agreed to be so referred to arbitration.

Jurisdiction: All matters arising out of or in any way connected with this contract shall be deemed to have arisen in Hyderabad and only the courts in Hyderabad shall have jurisdiction to determine the same.

52. RIGHT OF TECHNICAL SCRUTINY OF FINAL BILL

The Bank shall have right to cause a technical examination of the works and the final bill of the works and the final bill of the contractor including all supporting vouchers, abstracts, etc., to be made at the time of payment of the final bill. If as a result of this examination or otherwise any sum is found to have been overpaid or over certified, it shall be lawful for the Bank to recover the sum. The Bank reserves the right to alter / reduce amount certified by Consultant / Engineer, if noticed that certification is not proper.

The subject work will be scrutinized by the Chief Technical Examiner's Office, a technical wing of Central Vigilance Commission and other Vigilance and Audit Authorities of the Bank. Decision of this Authority shall be binding on the contractor. Any discrepancy noted defected shall be rectified by the contractor free of cost or appropriate amount will be recovered from the contractor's payment.

53. BANK ENTITLED TO RECOVER COMPENSATION PAID TO WORKMEN:

The Bank is obliged, by the virtue of the provisions of the workmen's compensation Act, 1923, or any statutory modification or re-enactment thereof to pay compensation to a workman employed by the contractor in execution of the works, the Bank shall be entitled to recover from the contractor the amount of compensation so paid, and without prejudice to the rights of the Bank under said Act. The Bank shall be at liberty to recover such amount or any part thereof by deducting it from the security deposit or from any sum due to the contractor under this contract or otherwise. The Bank shall not be bound to contest any claim made against it under the said Act, except on written request of the contractor and upon his giving to the Bank full security to the satisfaction of the Bank for all costs for which the Bank might become liable in consequence of contesting such claim.

54. ABANDONMENT OF WORKS:

If at any time after the acceptance of the Tender, the Employer shall for any reasons whatsoever not require the whole or any part of the works to be carried out, the Architect/ Bank shall give notice in writing to the contractor who shall have no claim to any payment of compensation or otherwise whatsoever on account of any profit or advantage which he might have derived from the execution of the whole works but which did not derive in consequence of the foreclosure of the whole or part of the work.

55. RETURN OF SURPLUS MATERIALS:

Notwithstanding anything to the contrary contained in any or all the clauses of this contract, where any material for the execution of the contract is procured with the assistance of the Bank by purchase made under orders or permits or licenses issued by the Government, the contractor shall hold the said materials economically and solely for the purpose of the contract and not dispose of them without the prior written permission of the Bank, if required by the Bank, at the price to be determined by the Architect having

due regard to the condition of the materials, the price to be determined not to exceed the purchase price thereof inclusive of Sales Tax, Octroi Duty and other such levies paid by the contractor in respect thereof. In event of the breach of the aforesaid condition, the contractor shall, in addition to being liable to action for contravention of the terms of license or permit and /or criminal breach of trust, be liable to Bank for all such moneys, advantage or profits resulting or which in the usual course would have resulted to him by reason of such breach.

56. RIGHT OF BANK TO TERMINATE CONTRACT IN THE EVENT OF DEATH OF CONTRACTOR IF INDIVIDUAL.

Without prejudice to any of the rights or remedies under this contract, if the contractor, being an individual die, the Bank shall have the option of terminating the contract without incurring any liability for such termination.

58. Workers will not be allowed for any accommodation in the building during progress of work.

59. Material shall not be carried by " lifts" in the building.

60. The contractor shall within 7 days of receipt of work order , submit to the architect / employer a detailed work programme to complete the work within the time scheduled in the tender .

APPENDIX / MEMORANDUM TO CONDITIONS OF CONTRACT

Estimated cost	Rs.133.21 lakhs + GST
EMD	EMD shall be Rs.1,33,219.00 payable in form of Demand Draft/Pay Order drawn from Nationalized Bank favoring Union Bank of India payable at Hyderabad.
Performance security deposit	The amount of performance security shall be 3% of the accepted value of the tender inclusive of 1% of Earnest Money Deposit
Time for completion of work	As per time schedule given in tender document i.e. 180 days from the date of issuance of work order (or) date of handing over the site, whichever is later.
Security Deposit	Nil
Defect Liability Period	Twelve months from the virtual completion.
Period of Final Measurement	1 month.
Liquidated damages	Shall be 1% of contract amount per week of delay subject to ceiling of 10% of the accepted contract amount.
Value of works for Interim Certificates	Value not less than Rs.30.00 lacs (Rs. Thirty Lacs only) or as decided by the Bank.
Period for honouring interim certificate.	75% of the bill amount shall be honoured within 14 days after getting certificate from project architect and submitting to the Bank. Balance 25% bill amount payable within 30 days after checking by the Bank.
Return of Security Deposit	15 Days after completion of defect liability period of Twelve months
Recovery towards taxes.	As per rules applicable from time to time.
Escalation/PVA on labour/material	NIL
Mobilization advance	NIL

ADDITIONAL CONDITIONS

1. **Tenderer to inspect Site:** The tenderer shall visit and examine the site conditions for proposed renovation. No extra changes made in consequence of any misunderstanding or incorrect information on any of these points or on grounds of insufficient description will be allowed. All expenses incurred by the contractor in connection with obtaining information for submitting this tender including his visits to the site or efforts in compiling the tender shall be borne by the Tenderer and no claim for reimbursement thereof shall be entertained.
2. **Attendance upon all Trades :** The general tenderer shall be required to attend on all the Tradesman or Sub-contractor/ contractors appointed by the Bank for Air-conditioning, Security Equipment, Hardware, Telephone and other special contactors. The rates quoted shall be inclusive of attendance and also allow the contractors and retain until such times the relevant Sub-contract works are completed.
3. All the materials (except where otherwise described) stores and equipment required for the full performance of the Work under the contract must be provided through normal channels and must include charge for import duties, sales tax, octroi and other charges and must be the 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 workmanlike manner. Samples of all materials to be used must be submitted to the Consultant/Engineer when so directed by the Consultant / Engineer and written approval from Consultant / Engineer must be obtained prior to placement of order.
4. **Stacking of material:** The contractor is not to stack any of his material recklessly so as to endanger the safety of the building and cause any nuisance to the occupants and the public.
5. **Extra charges:** It must be clearly understood that all the conditions of contracts are intended to be strictly enforced and that no extra charges in respect of extra work will be allowed unless they are clearly outside the spirit and meaning of the condition and unless such work shall have been ordered in writing.
6. **Protection of material and work:** The contractor shall be responsible for storing and watching his own material and protecting the work at his own cost. The contractor and his worker will be allowed to use lift. However, no paint drums or heavy bag of cement / paint will be allowed to be taken into the lift. Any damage / spoiling of lift / floor / dado caused during such act will have to be made good by the contractor at his own expenditure.
7. **Cost of transporting:** The tenderer shall allow in his cost for all transporting, unloading stacking and storing or supplies of goods and materials for this work on the site and in the places approved from time to time by the Architects. The tenderer shall allow in his price for transport of all materials controlled or otherwise to the site.
8. **Materials, Workmanship & Samples:** Materials shall be of approved quality and the best of their kind available and shall generally conform to I.S. Specifications, The Contractor shall order all the materials required for the execution of work as early as necessary and ensure that such materials are on site well ahead of requirement for use in the work. The work-involved calls for high standard of workmanship combined with speed and to the entire satisfaction of the Architects.
9. **Rates for Non-Tender Items:** Rates of items not included in Schedule of Quantities shall be settled by the Architects as mentioned in the variation clause of the Contract Conditions.
10. **Rate to include:** The rates quoted shall be for all heights and depths and for finished work.
The contractor shall ascertain from other contractors as directed by the Architects all particulars relating to their work with regard to the order of its execution and the position in which cases, holes and similar items will be required, before the work is taken in hand as no claims for extras will be allowed for cutting away work already executed in consequence of any neglect by the contractors to ascertain these particulars beforehand.

Before ordering materials, the contractors shall get the samples approved from the Architects well in time.

11. **Testing of work and material:** The contractors will have to carry out testing of the material at regular interval to proof quality, soundness and efficiency of the material. Expenditure required for testing and transportations shall be borne by the tenderer.

- Cost of testing and transport will be borne by contractors.
- Any other materials will be tested by contractors at his own cost as per the instruction of Architect and Bank from time to time.
- Contractor may have to test materials with any frequency or as instructed by Bank/Architects without any cost.

If after any such test the work or portion of works is found in the opinion of the Architect to be defective or unsound, the contractor shall pull down and re-do the same at his own cost. Defective materials shall immediately be removed from the site.

12. **Foremen and Tradesmen:** All tradesmen shall be experienced men properly equipped with suitable tools for carrying out the work of carpentry and joinery and other specialist trades in a first class manner and where the Architects deemed necessary, the contractor shall provide any such tools, special or ordinary which are considered necessary for carrying out the work in a proper manner.

All such tradesmen shall work under an experienced and properly trained foremen, who shall be capable of reading and understanding all drawings, pertaining to this work and the contractor shall also comply with other conditions set out in Clause 9 of the conditions of the contract.

13. **Work Programmed/ weekly progress report:** The contractor shall prepare and submit to architects for approval, a bar chart showing the programme of works of various items, fitted within the period stipulated for completion, within 7 days of the communication of the acceptance of the tender. The contractor shall also furnish necessary particulars to the site engineer for compiling weekly progress reports in the form furnished by the architects.

14. **Photographs:** The contractor shall at his own expense supply copies of large photographs not less than 25cm x 20cm (10"x8") of the works taken from two approved portions of each building, during the progress of the work, or at every important stage.

15. **Clearing of Site:** The contractor shall after completion of the work clear the site of all the debris and left-over materials at his own expense to the entire satisfaction of the Architects and Municipal or other public authorities.

The whole of the work shall be thoroughly inspected by the contractor and all deficiencies and defects put right. On completion of such inspection, the contractor shall inform the Architects in writing that he has finished the work and it is ready for the Architects inspection.

16. **Vouchers:** The contractor shall furnish the Architects with vouchers on request, to prove that the materials are as specified and to indicate the rates at which the materials are purchased in orders to work out the rate analysis of the non-tender items which he may be called upon to carry thereafter.

21. **TYPE OF CONTRACT:** The Contractor shall be paid for the actual quantity of Work done, as measured at Site, at the Item quoted by him in the Contract Bills.
22. **Schedule of Quantities:** The schedule of Quantities given in the Contract Bill is provisional and is meant to indicate the intent of the Work and to provide a uniform basis for tendering. The Bank reserves the right to increase or decrease any of the quantities or to totally omit any item of Work and the Contractor shall not claim any extras or damages on these grounds.
23. **Contract Sum (Consideration):** The rates and Items quoted by the Contractor in the priced bill of quantities (Contract Bills) shall be treated as firm and the contract sum shall be deemed to have been calculated with reference to the cost of execution of Works as set out in price bid of Contract Documents and shall not be adjusted or altered for any reason.
24. **Idle Labour/ Machinery:** Whatever the reason may be, **no claim** for idle labor, additional establishment cost of hire and labor charges of tools & plants would be entertained under any circumstances, even if the work is delayed / abandoned for any reason.
25. **Provisional Completion of works:**
 The Works shall be deemed to have been provisionally accepted after fulfillment of all the following by the Contractor:
- (a) Submitting As-Built drawings (Contractor shall mark all the services on drawings issued by the Engineer), Catalogues, Brochures, Data Sheets, manuals as directed by the Engineer.
 - (b) Obtaining certificate of Completion from the Consultant.
 - (d) Handing over of the Works to the Bank as directed by the Consultant.
26. **Non-compliance of instructions:** If within seven days after receipt of a written notice from the Consultant, requiring compliance with an instruction the Contractor does not comply therewith, then the Bank may employ and pay other persons to execute any Work whatsoever which may be necessary to give effect to such instructions and all cost incurred with such employment shall be recoverable from the Contractor by the Bank as a debt or may be deducted by him from any monies due or to become due to the Contractor under this Contract.
- Upon receipt of what purports to be instruction issued to him by the Consultant the Contractor may request the Consultant to specify in writing the provision of these conditions which empowers the issue of the said instructions. The Consultant shall forthwith comply with any such request, and if the Contractor shall thereafter comply with the said instruction, then the issue of the same shall be deemed for all purposes of this Contract to have been empowered by the provision of these Conditions specified by the Consultant in answer to the Contractor's request.
27. **Certification of Bills in absence of 'Claimant's Engineer :** If the Contractor fails to attend or neglects or omits to send his agent at the time of taking measurement or for examining the records or drawings then the measurements so taken by the Consultant, the records and drawings as prepared by the Engineer shall be taken to be correct, final and conclusive.
28. **Interim payment as adhoc against final bill:** 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 anyway the power 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 within one month of the date fixed for completion of the Work or of the date of certificate of completion

furnished by the Engineer and payment shall be made within six (6) weeks from the date of receipt of final Certificate from the Consultant.

29. **Cessation of Bank's liability:** The Bank shall not be liable to the Contractor for any matter or thing arising out of or in connection with the Contract or the execution of the Works, unless the Contractor shall have made a **claim in writing** before the giving of Certificate of Final Completion.
30. **In respect of building cleaning:** On completion the Contractor shall clean all windows and doors including the cleaning and oiling if necessary, of all hardware, inside and outside, all floors, staircases, and every part of the building. He will leave the entire building neat and clean and ready for immediate occupation and to the satisfaction of the Bank.
31. **In respect of extension and claims of contractor:** The Contractor, in his application for grant of time shall clearly bring out the **financial effect** of extension of time requested by him. In case no financial effect is stated in the request for grant of extension of time, the same shall be taken as zero and it shall be presumed that the Contractor has mitigated whole of the losses due to the delays of all kinds.
32. **In respect of contractor cannot claim extra cost:** Provided that the Contractor shall **not been titled to recover** any such extra cost unless he gives written notice to the Consultant of his intention to claim within twenty-eight days of the Consultant's order. The Consultant shall in consultation with the Bank settle and determine such extra payment and/or extension of time to be made to the Contractor in respect of such claim as shall, in the opinion of the Consultant, be fair and reasonable, and provided the Contractor has taken all steps to mitigate the losses.
33. **In respect of no compensation to contractor for increasing work progress:**
If for any reason, the contractor is not provided with an extension of time, if the rate of progress of the works or any section is at any time, in the opinion of the Consultant, too slow to ensure completion by the prescribed time or extended time for completion. The Consultant shall so notify the contractor in writing and the contractor shall thereupon take such steps as are necessary and the Consultant may approve to expedite progress so as to complete the works or such sections by the prescribed time or extended time. The contractor shall **not be entitled** to any additional payment for taking such steps.
34. **In respect of no additional cost for scheduling and programming:**
The contractor shall mobilize or remobilize or adjust his resources according to the priorities set by the Employer **at no extra cost** to the Employer.
35. **Handing over the site by Bank**
The site shall be handed over in the phased manner floor wise but completion of the entire project to be considered within 180 days from the issuance of work order or date of handing over the site whichever is later.
36. 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 to comply with the instructions of employer / consultant - Site engineer with minimum experience of 5 yrs and supervisor with minimum experience of 3 yrs
37. The contractor will be required to consult and cooperate with the other contractors of various trades in the building
38. As koti building is a functional office , material shall not be placed on lobby areas etc .
Work shall be done with minimum inconvenience to the staff and customers .

PROFORMA FOR APPLICATION FOR EXTENSION OF TIME PERIOD

1.	Name of Contractor	:	
2.	Name of the work as given in the Agreement	:	
3.	Agreement No.	:	
4.	Estimated tender amount	:	
5.	Date of Commencement of work as per Agreement	:	
6.	Period allowed for completion of work as per Agreement.	:	
7.	Date of Completion stipulated in Agreement.	:	
8.	Period for which extension of time has been give previously	:	
a)	1st extension vide Architect's /Bank's letter	:	
	No. | Dated | Month | Days		
b)	2 nd extension vide Architect's /Bank's letter	:	
	No. | Dated | Month | Days		
c)	3 rd extension vide Architect's /Bank's letter	:	
	No. | Dated | Month | Days		
d)	4 th extension vide Architect's /Bank's letter	:	
	No. | Dated | Month | Days		
	Total extension previously given	:	
9.	Reason's for which extensions have been previously given (Copies of the previous applications should be attached)	:	
10.	Period for which extension is applied for	:	
11.	Hindrances on account of which extension is applied for with dates on which hindrances occurred and the period for which these are	:	

	likely to last.		
a)	Serial No.		
b)	Nature of Hindrance		
c)	Date of occurrence		
d)	Period for which it is likely to last.		
e)	Period for which extension required for this particular hindrance		
f)	Over lapping period if any, with reference to item (e) above		
g)	Net extension applied for		
h)	Remarks, if any		
12.	Extension of time required for extra work	:	
13.	Details of extra work and the amount involved	:	
a)	Total value of extra work		
b)	Proportionate period of extension of time on estimated amount put to tender.		
14.	Total extension of time required for 11 & 12	:	

Submitted to the Architect/Bank

Date:

Signature of Contractor

PARTICULAR SPECIFICATIONS
PART-I
SECTION I: DEMOLITION, DISMANTLING AND MODIFICATIONS DURING CONSTRUCTION OF
BUILDING INTERIORS

GENERAL

SCOPE OF WORK

Work included:

This section covers the requirements of works involving demolition and/or dismantling parts of building interiors not involving the structure or any part of the building that contributes to the integrity and stability of the building

This section includes preliminary works in preparation for demolition such as obtaining permits; disconnection and/or controlled operation of building services; precautionary measures for the safety of the building, its occupants and workers.

This section includes demolition of non-load-bearing masonry and concrete walls; ally types of partitions and wall cladding; doors and windows; suspended ceiling; wall and floor finishes.

This section includes the dismantling of built-in cabinets, counters, Kitchen Platform, furniture and fixtures.

This section includes disconnection, dismantling and controlled operation of electrical systems, water supply, drainage and sanitary systems, HVAC systems and all other building services by skilled operatives competent in their respective fields.

This section includes the salvaging, retrieval and safe storage of all material as required by the contract and the transport and disposal of all unwanted material and debris.

Work excluded:

This section does not include structural demolition or modifications.

RELATED WORK SPECIFIED ELSEWHERE

Temporary works

Electrical

Water supply & drainage

SUBMITTALS

The contractor shall submit the following to the architect for review and approval well before the commencement of work.

- Required approvals from all concerned authorities.

- Proposed demolition and dismantling plan and day-to-day progress schedule showing clearly the sequence of operations for disconnection of building services, controlled operation of services to retain and safety precautions. This shall be accompanied by description of procedures proposed to be followed.
- Equipment proposed to be used for demolition and dismantling.
- Proposals for temporary works to partition and protect adjacent or nearby areas in use, including dust control and clean up procedures.
- Proposal for temporary storage of salvaged material and for debris to be transformed off site.

CONTROL OF PROCEDURES AND SAFETY

The contractor shall devise and be responsible for all procedures to ensure the safety of the building, the workers and the other occupants during the demolition and dismantling work. The work shall at all times be under the direct supervision of experienced foremen under the overall supervision of the contractor's site engineer.

HANDLING, STORAGE, TRANSPORTATION AND DISPOSAL

Handle and store materials retrieved from the demolition and dismantling in accordance with IS:7969. Whenever there is a conflict in the requirements of IS:7969 and the provisions herein, the more stringent of the specifications shall apply.

Store debris and salvaged material separately in designated places approved by the submittals procedure described above. All salvaged material shall be classified and stored separately by categories agreed upon prior to commencement of demolition.

Do not pile up material in a manner that will cause the structure to be over loaded. Stack material so that the stacks are stable and do not cause obstruction to movement.

Do not allow debris to accumulate beyond the capacity of the approved area for temporary storage. Do not dump debris in public rights-of-way, in private property without owners consent, in municipal garbage receptacles etc. The contractor shall dispose of debris only at dumping grounds approved by the local authority in manner not objectionable to the authority.

Transport debris to the approved dumping grounds at times permissible by law and acceptable by local practice. Take precautions to avoid spillage of debris from the transport vehicle en-route.

MATERIALS AND PRODUCTS

SCAFFOLDS AND LADDERS

Scaffolds and ladders used in the demolition and dismantling shall be in accordance with IS:3696 Part 1 and Part 2.

The scaffolding shall be designed and erected by the contractor in accordance with the requirements of the work, by experienced workers. All scaffolding material shall be in good serviceable condition and assembled to be stable in the conditions of the work being performed.

MECHANICAL EQUIPMENT

Do not use mechanical equipment without the prior approval of the architect.

Do not use gas cutting and electric welding or cutting without the prior approval of the architect. Take special precautions to prevent fire if permission is granted for gas and electrical cutting and welding.

EXECUTION

GENERAL

Survey and mark out clearly the portions that are to be demolished or dismantled. Proceed with demolition and dismantling strictly in conformance with the plans, sequence, schedules and procedures proposed by the contractor and approved by the architect.

Proceed with work only in the presence and under control of skilled supervisors.

Do not proceed with work if latent conditions contrary to expectations or assumptions are encountered as work proceeds. Do not proceed with work if any part of the building assumed to be non-structural and non-load-bearing is discovered or suspected to be structural and contributing to the stability of the building. Report to the architect and obtain approval to proceed further.

Maintain in a journal with serially numbered pages, inventories of all salvaged items as the work proceeds.

ELECTRICAL

Dismantling of electrical installation shall be carried out under the supervision of a licensed electrical contractor, employing competent certified electricians.

Carefully survey the entire existing system and coordinate dismantling work with related temporary permanent works, if any. Modify the existing system, if required before commencing dismantling work to ensure that the functioning of systems outside the demolition areas is not affected.

Shut off and isolate electric supply to the demolition and dismantling area. Take precautions to ensure that the disconnected circuits may not be accidentally re-energized.

- Disconnect supply cables and isolate all distribution boards within the work areas. Disconnect and remove the distribution boards. Provide temporary service connections to the work areas from a temporary DB fed by an exclusive cable tapped from a board outside the work area with an isolation switch close to the temporary DB. Do not provide temporary services through any existing circuits in the areas to be demolished.
- If DB and circuits located within the demolition areas cannot be disconnected or diverted, they shall be clearly marked out and identified with cautionary signs to distinguish them from others that are to be dismantled.
- Have a skilled electrician on standby.
- Fixtures and fittings shall be removed only by skilled technicians to salvage them with minimum damage.
- Complete dismantling of electrical installation before commencing demolition of walls and partitions, flooring, ceiling etc.

VRF/VRV TECHNICAL SPECIFICATIONS

CHAPTER-1 ELECTRICAL WORK

1.0 SCOPE

The scope of work covers the requirements for the electrical works associated with air conditioning applications, namely, switch boards (MCCs), power cabling, control wiring, earthing, and remote control-cum-indicating panels. Electric motors are not covered here, as these are covered as part of the respective equipment specifications.

1.1 GENERAL

Unless otherwise specified in the tender specifications, all equipments and materials for electrical works shall be suitable for continuous operations on 415 V / 240 V \pm 10% (3 phase / single phase), 50 Hz. AC system. Where the use of high voltage equipments is specified in particular works, all the respective equipments shall be suitable for continuous operation on such specified high voltage.

All electrical works shall be carried out complying with the Indian Electricity Rules, 1956 as amended to date.

All parts of electrical works shall be carried out as per appropriate CPWD General Specifications for Electrical work, namely, Part I (Internal) 2005 and National Building Code 2005 all as amended to date.

All materials and components used shall conform to the relevant IS specifications amended to date.

1.2 SWITCH BOARDS / MOTOR CONTROL CENTRE

The main switch board in the Each AHU room shall be floor mounted, free standing cubical type and shall be factory built fabricated by one of the reputed switch board manufacturer. It shall be suitable for termination of the incoming cable(s)/ bus trunking from top/ bottom as per site conditions. The switchboards in air handling unit (AHU) rooms shall be wall mounted, or floor mounted as feasible at site and as approved by the Engineer- in - Charge, but they shall be cubical designed, unless otherwise specified and from open able from front.

The capacity of switch gear, starters etc. shall be suitable for the requirements of loads fed/controlled. Starting currents shall be duly considered in case of motor loads.

MPCB shall be used up to and including 63 A for motor applications and MCCB shall be used for other loads. ACB shall be used for 630 A and above ratings.

All MCCBs / MPCBs shall be of AC 23 duty as per IS: 4064-1978 as amended up to date.

Switch boards controlling motors shall house starters for motors, unless otherwise specified. The starter shall be located adjacent to the controlling switch gear.

- vi) One-volt meter with selector switch, a set of indicating lamps and fuses for voltmeter and lamps shall be provided at each switchboard. One ammeter with

CTS, and selector switch shall be provided with each motor starter. Instruments shall be flush mounted with the panel and have a glass index not higher than 1.5. The instruments and accessories shall be provided whether or not specifically indicated in the tender specifications.

- vii) The fabrication of switchboard shall be taken up only after the drawings for the fabrication of the same are approved by the Engineer-in-Charge.
- viii) Switchboards shall be fabricated as per specifications indicated in sub-para above.
 - ix) The layout of bus bars and cable alleys shall be designed for convenient connections and inter-connections with the various switchgear. Connections from individual compartments to cable alleys shall be such as not to shut down healthy circuits in the event of maintenance work becoming necessary on a defective circuit.
 - x) Care shall be taken to provide adequate clearances between phase bus bars as well as between phase bus bars, neutral and earth.
 - i) Where terminations are done on the bus bars by drilling holes therein, extra cross section shall be provided for the bus bars. Alternatively, terminators. Cables connected to the upper tiers shall be duly clamped within the switchboard.
 - ii) Provision shall be made for proper termination of cables at the switchboards such that there is no strain either on the cables, or on the terminators. Cables connected to the upper tiers shall be duly clamped with the help of PVC cable ties within the switchboard.
 - iii) Identification labels shall be provided against each switchgear and starter compartment, using plastic engraved labels.
 - iv) Metallic danger conforming to relevant IS shall be fixed on each electrical switchboard / MCC.

1.3 POWER CABLING

- v)
 - i) Unless otherwise specified, the power cables shall be XLPE insulated, PVC outer sheathed aluminium / copper conductor, armoured cables rated for 1100 V grade as per IS: 1554 (Part 1) - 1988. The power cables shall be of 2 core for single phase, 4 core for sizes up to and including 25 sq.mm, 3-1/2 core for sizes higher than 25 sq.mm for 3 phase. Where high voltage equipments are to be fed, the cables shall be rated for continuous operation at the voltages to suit the same.
 - ii) Power cables shall be of sizes as indicated in the tender specifications. In all other cases, the sizes shall be as approved by the Engineer-in-Charge, after taking into consideration the load, the length of cabling and the type of load.
 - iii) Cables shall be laid in suitable metallic trays suspended from ceiling, or mounted on walls, or laid directly in ground or clamped on structures, as may be required. Cable ducts shall not be provided in plant rooms. Cable trays shall be sheet steel with adequate structural strength and rigidity type, designed with adequate dimensions for proper heat dissipation and also access to the cables with necessary supports and suspenders shall be provided by the Air-conditioning contractor as required.
- vi) Cable laying work shall be carried out in accordance with 15.3(iii) above. The scope of work for the Air-conditioning contractor shall include making

trenches in ground and refilling as required, but excludes any masonry trenches for the cable work.

1.4 CONTROL WIRING

- i) Control wiring in the plant rooms and AHU rooms shall be done using ISI marked PVC insulated and PVC sheathed, 1.5 sq,mm copper conductor,250V grade, cables drawn in ISI marked steel or PVC conduits. Alternatively, armoured multi-core copper conductor cables may also be used for the purpose. The control cables interconnecting the plant room and the AHU rooms shall be of multi-core armoured type only, and suitable for laying direct in ground.
- ii) The number and size of the control cables shall be such as to suit the control system design adopted by the Air-conditioning contractor.
- iii) ISI marked steel conduits pipes, wherever used, shall be of gauge not less than 1.6 mm thick for conduits upto 32 mm dia and not less than 2.0mm thick of higher sizes. All conduit accessories shall be threaded type with substantial wall thickness.
- i) Control cables shall be of adequate cross section to restrict the voltage drop.
- ii) In the case of control wires drawn through steel conduits, the wire drawing capacity of conduits as specified under the CPWD general specifications for Electrical Works (Part I) 2005 shall not be exceeded.
- iii) Runs of control wires within the switchboard shall be neatly bunched and suitably supported/clamped. Means shall be provided for easy identification of the control wires.
- iv) Control wiring shall correspond to the circuitry/sequence of operations and interlocks approved by Engineer-in -Charge.

1.5 EARTHING

- i) Provision of earth electrodes and the type of earthing shall be as specified in the tender specifications.
- ii) The earth work shall be carried out in conformity with CPWD Specifications for Electrical works (Part-I), Internal 2005 / NBC 2005.
- iii) Metallic body of all medium voltage equipments and switch boards shall be connected by separate and distinct earth conductors to the earth stations of the installations; looping of such body earth conductors is acceptable from one equipment, or switch board to another.
- iv) G.I. plate earthing shall be provided for PTAC plants and reciprocating central AC plants upto 100 TR capacity. Above 100 TR reciprocating units, copper plate earthing shall be provided.
- v) The size of earth conductors for body earthing of equipments shall be as under:-

Motor upto and including 10 HP rating	2Nos.3mm dia copper wire / 2 nos. 4mm dia GI wire
12.5 HP to 40 HP	2Nos.4mm dia copper wire / 2 nos. 6mm dia GI wire
50HP to 75 HP	2Nos.6mm dia copper wire / 2 nos. 25x3mm GI strip
Above 75 HP	2Nos.25mm x 3mm copper strip / 2 nos. 25x6mm GI strip

Switch boards with incoming rating upto

100 A	2Nos.3mm dia copper wire / 2 nos. 4mm dia GI wire
125 A to 200 A rating	2Nos.6mm dia copper wire / 2 nos. 25x3mm GI strip
Above 200 A rating	2Nos.25mm x 3mm copper strip / 2 nos. 25x6mm GI strip

- i) Armouring of cables shall be connected to the body of the equipments/switch board at both the ends. Compression type glands shall be used for all such terminations in the case of PVC cables.

1.6 MOTOR STARTER

- i) The motor starter shall conform to IS: 1822 “Motor starters of voltage not exceeding 1000 volts” and shall be air insulated and suitable for 415 volts, \pm 10%, 50 Hz, 3 phase AC supply. Enclosures shall have protection of IP 52 for Indoor applications and IP 55 for outdoor applications.
- ii) Starter for the motor shall be direct on line (D.O.L) for motors up to and including 7.5 H.P. rating and automatic star-delta close transition type for motors of higher ratings unless otherwise specified in the tender specifications. Starters shall be rated for intermittent duty. Starting current should not exceed two times the full load current.
- i) The starter shall be mounted on the main electrical control panel/ unit mounted / self mounted as specified.
- ii) Each starter shall be provided with the following protections:-
- Thermal overload on all the three phases with adjustable settings,
 - Under voltage protection, and
 - Independent single phasing preventor. (current sensing type)
- iii) Adequate number of extra NO / NC contacts for interlocks, indicating lamps etc. shall be provided on the starter / contractor.

1.7 PAINTING

All panels shall be supplied with the manufacturer’s standard powder coating .

CHAPTER- 2.0
INSPECTION, TESTING AND COMMISSIONING

2.0 SCOPE

This chapter covers the initial inspection and testing of condenser, AHUs at manufacture's works, initial inspection of other equipments/ materials on receipt at site, final inspection testing & commissioning of all equipment at site & description of testing requirements & procedure.

2.1 INITIAL INSPECTION AT MANUFACTURE'S WORKS

Compressor

- i) Salient features such as model, No. of cylinders, capacity control, provision of crank case heaters, type of lubrication etc. shall be verified against the requirements visually without opening the compressors.
- ii) Manufacturer's internal test certificates shall be scrutinized to check compliance with the requirements as specified in the order.
- iii) Rate of leak test shall be checked by developing 7 Kg/sq.cm (gauge) pressure on HP side and 1 Kg/ sq.cm on LP side using dry Nitrogen air or carbon dioxide. The leakage through the valves, shaft seal, cylinder heat gasket etc should not be more than 0.3 Kg/sq.cm per cylinder in 4 minutes time. Alternatively this may be demonstrated through vacuum.
- iv) Pneumatic pressure test shall be carried out at 22 Kg/ sq.cm and by submerging the compressor in water for 1 hour & there shall be no leakage.
- v) Free running test shall be carried out at the rated speed specified in contract. This test shall be carried out for 30 minutes in open space. During this running test following operations are to be noted:
 - i) Manual loading / unloading of capacity control
 - ii) Lubrication oil pressure
 - iii) Safety valve operation
- v) Vacuum test for the compressor for 0.5mmHg..

2.2 Condensers

- i) Salient features like number of tubes, inside diameter of tubes (from which the gauge of the tube can be verified), no. of passes, material of fins, length of condenser, provision of fittings like safety valve, water, gas connection shall be verified during stage inspection. The tube thickness shall be checked.
- ii) Manufacturer's internal test certificates shall be furnished and it shall be verified against contract requirements.
- iv) Pneumatic pressure test at twice the normal condensing pressure for gas side of condenser shall be carried out.

2.3 Air Handling Units:

- i) Salient features such as model, size, physical dimensions, and other details of various sections, fan motor details, fan dia, static pressure etc. shall be verified against the contract requirements.
- ii) Manufacturer's internal test certificates for the motor and air handling unit shall be furnished and scrutinized as per contract requirements.
- iii) Test certificate for static and dynamic balancing of the fan/ blower should be furnished. Fan balancing may be witnessed by Engineer-in-Charge or his authorized representative.
- iv) Salient features like, type, material, no. and gauge of fins and tubes and no. of rows of cooling coil shall be furnished and verified with reference to contract requirements during stage inspection.
- v) Hydraulic pressure to the extent of 10 Kgf/sq.cm or pneumatic pressure of 21 Kgf/ sq.cm shall be applied to cooling coil and this pressure should be maintained for 1 hour and no drop should be observed indicating any leaks.

2.4 INITIAL INSPECTION AT SITE

Ducting

- i) The sheet used for ducting shall be checked for physical test at site. The physical test should include the sheet thickness and bend test as per relevant IS specifications.
- ii) Zinc coating of GSS sheet as mentioned in the tender documents may be got tested from a laboratory to verify that same meets the contract requirements.

Switch Gear, Control Gear, and Measuring Instruments

These should be of specified make. For air circuit breaker manufacturer's test certificate shall be furnished by contractor and the same shall be verified as per contract requirements.

Electric Motors

Electric motors should be of specified make, manufacturer's test certificate for electric motor shall be furnished.

Insulation and acoustic lining

- i) Physical verification for thickness and make should be made as per contract before application of insulation.
- ii) Manufacturer's test certificate for density should be furnished.
Note: Accuracy of testing instruments shall be as mentioned in the final inspection procedure.

2.5 FINAL INSPECTION

- i) After completion of the entire installation as per specification in all respects, the AC contractor shall demonstrate trouble free running of the AC equipments and installation for a period of minimum 120 hours of running as detailed under following points:

After the installation work has been completed by the contractor, he will conduct tests and make adjustments as may be necessary to satisfy himself that the plant including low side equipments is capable of continuous running. There after he will offer to the department a running-in period of 7 days subject to a minimum aggregate of 120 hrs at his cost. The duty cycle of the plant during this running in period shall be same as that specified in the tender documents. In case of multiple compressor installations, all the compressors should be run by rotation. The plant will be operated and a log of all parameters will be maintained during this period. The contractor will be free to carry out necessary adjustments etc during this period without stopping the plant. Record of inside conditions will be made during this period to check the same are as per NIT requirements. The plant will be said to have successfully completed the running-in-period, if no break down or abnormal/unsatisfactory operation of any machinery occurs during this period. After this the plant will be made available for beneficial use. After the plant has operated without any major break down/ trouble and inside conditions are maintained as per NIT requirements for the above specified running in period, it shall be taken over by the department subject to guarantee clause mentioned else where in the tender. This date of taking over of plant after trouble free operation during the running in period shall be the date of acceptance.

2.6 TESING REQUIREMENTS AND PROCEDURES

Balancing of all air systems and all tests as called for in the specification shall be carried out by the HVAC contractor in accordance with the specifications and relevant local codes if any. Performance tests of individual equipment and control shall be carried out as per manufacturer's recommendation.

All tests and balancing shall be carried out in the presence of Engineer-in-Charge or his Authorized representative.

The whole system balancing shall be tested with microprocessor based hi-tech instruments with an accuracy $\pm 0.5\%$.

The instrument shall be capable of storing data and then down loading into a P.C. The HVAC contractor shall provide a minimum but not limited to the following instruments:

- Microprocessor based calculation meter to measure DB and WB temperature, RH and Dew Point
- Velo meter to measure air volume and air velocity
- Pitot tube
- Electronic rotary vane Anemometer
- Accubalance flow measuring hood

The contractor shall be responsible to provide necessary sockets and connections for fixing of the testing instruments, probes etc.

2.6.1 Air Systems

Systems are to be balanced by first adjusting the total flow at the fan, then by adjusting main dampers and branch dampers. Only final minor adjustments are to be made with register and diffuser dampers. Balancing of the air system shall be accomplished without causing objectionable air noise. Baffles and orifice plates required for proper air balance shall be furnished and installed by the contractor. Basically the following tests and adjustments are required.

- i) Test all fan systems to provide proper cfm/ cmh.
 - ii) Adjust fresh air, return air and exhaust dampers to provide proper air quantities in all modes of control.
 - iii) Test and record fresh air, return air and mixed air temperature at all air handling units. Test and record data at all coil after air and hydronic systems are balanced. Measure wet and dry bulb temperature on cooling coils.
 - iv) Make point tube transverse at all main supply and return ducts to set proper air quantities. Adjust all zone and branch dampers to proper cfm /cmh.
 - v) Test and adjust each register, grills , diffusers or other terminals equipments to within 5% of design air quantity. Each opening shall be defined on the test report by size, manufacturer’s model , room location, design cfm and actual cfm. Outlets shall be adjusted to minimize objectionable drafts.
- i) Test and record static pressure drop across all filters and major coils.
 - ii) High velocity duct systems shall be tested for leakages. If excessive or audible leakage is detected, the defect shall be repaired by the contractor. Sufficient static pressure readings shall be taken from the air handling units to the terminal units to establish system static pressure.

2.6.2 Balancing Tolerance

System shall be balanced with in the following tolerance:

- 1. Duct leakage rates (at operating pressures)
 - Low pressure ducts (0 to 0.5 Kpa) 5% of full flow
 - Medium pressure ducts (0.5 to 3 Kpa) 1% of full flow
 - High pressure ducts (greater than 3 Kpa) 1% of full flow
- 2. Air flow rates
 - Under 70 L/S 10% of flow
 - Over /at 70 L/S 5% of flow
- 3. Water flow rates
 - Chilled Water 2% of flow
 - Other 5% of flow
- 4. Heat flow rates
 - Heat exchangers 5% of design capacity

Procedure:

Review all pertinent plants, specifications, shop drawings and other documentation to become fully familiar with the systems and their specified and intended performance. Furnish equipment and instruct sheet metal trade on proper use for conducting duct leakage tests. Conduct first test as a way of instructing the above trades in the presence of the Department’s representative.

Test performance and continuously record on a 24 hour basis, temperature and humidity levels where control equipment is provided for that purpose in certain critical areas. Before commissioning of the equipment, the entire electrical installation shall be tested in accordance with relevant BIS codes and test report shall be furnished by a qualified and authorized person.

2.6.3 Reports

Provide 3 copies of the complete balancing and testing reports to the department. Report shall be neatly typed and bound suitable for a permanent record. Report forms shall contain complete test data and equipment data as specified and safety measures provided as follows :

i) **Safety measures**

All equipments shall incorporate suitable safety provisions to ensure safety of the operating personnel at all times. The initial and final inspection reports shall bring out explicitly the safety provisions incorporated in each equipment.

2.6.4 Final documentation

The contractor shall leave the system operation in complete balance with water and air quantities as shown on drawings. Set stops on all balancing valves and lock all damper quadrants in proper position. Secure all automatic damper and valve linkages in proper positions to provide correct operating ranges. Proper damper positions shall be marked on ducts with permanent indication. Notify the department of any areas marginal or unacceptable system performance.

The above tests and procedures are mentioned herein, for general guidance and information only, but not by way of lamination to the provisions of conditions of contract and design/ performance criteria.

Upon commissioning and final handover of the installation, the HVAC contractor shall submit (within 4 weeks) to the Engineer-in-Charge/ department 6 (six) portfolios of the following indexed and bound together in hard cover ring binder (300 x 450 mm) in addition to the completion drawings as follows:

Completion Drawings

Three sets of following laminated drawings shall be submitted by the contractor while handing over the installation to the Department. Out of this one of the sets shall be laminated on a hard base for display in the AC plant room. In addition one set will be given on compact disc.

- a) Plant installation drawings giving complete details of all the equipment's, including their foundations,
- c) Pipeing layout drawings including insulation giving sizes and lengths of all the pipes and the sizes and locations of all types of valves, and including isometric drawings for entire piping including pipe connections to the various equipments and insulation details wherever required.
- d) Duct layout drawings with their sizes and locations, and sizes and locations of all dampers, grills and diffusers.

- e) Line diagram and layout all electrical control panels giving switchgear ratings and their disposition, cable feeder sizes and their layout,
- f) Control wiring drawings with all control components and sequence of operations to explain the operation of control circuits.
- g) Comprehensive operation and maintenance manual
- h) Test certificates, consolidated control diagram and technical literature on all controls.
- i) Equipment warranties from manufacturers
- j) Commissioning and testing reports
- k) Rating charts for all equipment
- l) Log books as per equipment manufacturers standard format
- m) List of recommended spares and consumables
- n) Any special tools required for the operation or the maintenance of the plant shall be supplied free with the plant.

At the close of the work and before issue of final certificate of completion by the Engineer -in-Charge, the contractor shall furnish a written guarantee indemnifying the department against defective materials and workmanship for the Defects liability period. The contractor shall hold himself fully responsible for re installation or replaced free of cost to the department.

- Any defective material or equipment supplied by the contractor.
- Any material or equipment supplied by the department which is proved to be damaged or destroyed as a result of defective workmanship by the contractor.

Cassette type indoor units.

These units shall be installed between the bottom of finished slab & top of false ceiling.

The maximum allowable height for the cassette type units shall not exceed 350 mm.

The unit shall be pre charged with first charge of R 32 / R 134A / R 407 / R 410 refrigerant. Additional charge shall be added as per refrigerant piping at site.

The unit must have in built drain pump, suitable for vertical lift of 750 mm.

The unit casing shall be Galvanized Steel Plate / or as per manufacturer's specifications.

Unit must be insulated with sound absorbing thermal insulation material, Polyurethane foam. The noise level of unit at the highest operating level shall not exceed 42 dB(A), at a vertical distance of 1.5 m from the grille of the unit.

Unit shall have provision of connecting fresh air without any special chamber & without increasing the total height of the unit (288 mm maximum).

The unit shall be supplied with suitable decorative panel.

The unit shall be supplied with Resin Net filter with Mold Resistance. The filter shall be easy to remove, clean & re install.

The unit will be connected in series to a suitable outdoor unit & it must be possible to Operate the unit independently, through corded/ cordless remote specified in the "Bill of quantities". The unit will be further connected to Intelligent Building Management System (To be supplied by other vendors) & it shall be possible to operate the unit through this IBMS system.

The unit shall be supplied with following from the factory with following:

Operation Manual
Installation Manual
Paper pattern for installation
Drain hose/ Clamp metal/ Washer fixing plate/ Sealing pads/ Clamps/ Screws/
Washer for hanging bracket/ Insulation for fitting

B. Wall Mounted Units.

Wall mounted units must be compact & stylish design that does not detract from the Décor of the room.

The unit shall be precharged with first charge of R 32 / R 134A / R 407 / R 410 refrigerant.

Additional charge shall be added as per refrigerant piping at site.

Each indoor unit must have electronic expansion valve operated by microprocessor thermostat based temperature control to deliver cooling/ heating as per the heat load of the room.

The unit must have provision of adding drain pump kit if required & specified. The drain pump must be suitable to lift drain up to 1000 mm from the bottom of the unit.

Unit must be insulated with sound absorbing thermal insulation material, polystyrene/Polyethylene foam. The noise level of unit at the highest operating level shall not exceed 46 dB(A), at a vertical distance of 1.5 m from the grille of the unit.

The unit shall be supplied with Resin Net filter with Mold Resistance. The filter shall be easy to remove, clean & re install.

The unit grille must be washable with soap solution.

It shall be possible to set minimum 5 steps of discharge angle by remote controller.

It shall be possible to fit drain pipe from either side of the unit (Left or right)

The unit will be connected in series to a suitable outdoor unit & it must be possible to Operate the unit independently, through corded/ cordless remote specified in the bill of quantities. The unit will be further connected to Intelligent Building Management System(To be supplied by other vendors) & it shall be possible to operate the unit through this IBMS system.

The unit shall be supplied with following from the factory with following:

Operation Manual
Installation Manual
Installation panel
Paper pattern for installation
Insulation tape/ Clamps/ Screws

A - 1: COPPER TUBING.

The parent material used for air - conditioning system refrigerant tubing should be Copper tubes, tubes and fittings conforming to following specifications:

1. Material composition should be conforming to C-1220 (JIS-H-3300) or C-12200 (ASTM).It should have a minimum Copper content of 99.9 % and Phosphorus content between 0.015 %

and 0.040 %. It should have low residue (below 0.038 gm / sq mtr). The material should also be as per the RoHS norms specified by EU; that is, Mercury, Chromium and Lead contents below 1000 ppm, and Cadmium content below 100 ppm.

2. Physical properties of the material should conform to JIS-H-3300 or ASTM-B-68 & B-75, should be tested for Tensile / elongation / hardness / grain size tests as per ASTM B -280.
3. Dimensional tolerance should be as per JIS-H-3300 or ASTM-B-251. The tubes should be tested using non-destructive Eddy current test before the final anneal, as per JIS- H-3300 or ASTM-E-243.
4. Heat treatment should be carried out in non-oxidizing atmosphere to ensure oxygen free and Cuprous oxide-free surface.
5. Proper certificates describing composition and results of all tests carried out must be supplied with each consignment. These certificates, along with check results for dimensional and thickness accuracy are recommended to be carried out for every delivered lot, should be maintained till handing over of the project.
6. Tubes should have 360 degree concentric wall thickness along their entire length.
7. Wall thickness for soft tubes (bright annealed mirror finish) should be 0.8 mm for ¼”, 3/8” & ½” tubes, 1.0 mm for 5/8” tubes, 1.2 mm for ¾” tubes. Wall thickness for hard tubes should be 1 mm for 7/8”, 1” and 1.1/8” tubes, 1.1 mm for 1.1/4”, 1.2 mm for 1.3/8”and 1.3 mm for 1.5/8” tubes.
8. Wall thickness for elbows and fittings should be minimum 0.2 mm more than corresponding tube / tube size.
9. For 1/4” to sizes up to ¾”, pulley type benders should be used for soft tubes and brazed joints should be avoided as far as possible. Similarly, for half hard tubes of size 3/4” or more, one side expanded tubes must be used and use of couplings should be avoided as far as possible.

A -2 : TUBING DESIGN:

1. Contractor should study the tender / GFC drawings carefully, and should carry out detailed survey of site, relating the drawings with site, and understand the system design and site limitations.
2. Contractor should also collect final architectural and reflected ceiling plans from client and study the drawings for any mismatches with the HVAC drawings received.
3. Contractor should discuss any such mis- matches and any doubts regarding system design with the consultant and get all doubts clarified.
4. Before commencement of tubing work, proper shop drawings must be generated by the contractor, and same should be got approved from the consultant. The drawings must clearly indicate schematic flow diagrams for various circuits, tube sizes, description and quantities for refrigerant joints, indoor and outdoor unit models and room / block /floor names, tube routes, levels for horizontal tubes, details regarding insulation type and thickness and surface treatment for insulation, typical and critical sections and any other details to explain the entire tubing layout to the installer.
5. Tube sizing and routing must be carried out taking into consideration various site constraints and system manufacturer’s recommendations.
6. Care should be taken to design tubing as per the manufacturer’s recommendation for maximum tubing total length, maximum tubing length after first tapping, vertical height

difference between outdoor and indoor units etc. and necessary corrections should be carried out in outdoor unit capacity if required.

A - 3 : REFRIGERANT TUBING INSTALLATION WORK:

1. The installer must first study the shop drawings in detail with respect to the site condition and point out any fouling / alternatives to the agency prepare shop drawing and necessary revisions must be carried out in the drawings, to be approved by consultant.
2. The layout must be marked on the true ceiling and any civil openings required should be marked and got done from concerned agency.
3. Supports as described in BOQ / specifications should be installed, leaving adjustable free length for supports.
4. Before installation, the tubes and tubes must not be removed from their original packing. Proper storage of tubing is a must to maintain the temper of the tubes / tubes. Any abrasion on ends / surface, or any in grace of dirt / dust must be avoided. Proper Polyethylene sheets should be used for covering the tubes and tubes, while wooden pellets and soft expanded Polyethylene / rubber sheets should be used as floor supports.
5. Necessary loops / slopes must be followed as recommended by system manufacturer.
6. Tubes must be cut to required sizes using cutting tools recommended by system manufacturer.
7. Using proper quality of brazing set, Oxygen / Acetylene and Copper brazing rods having minimum 2% Silver content.
8. During brazing, Nitrogen must be filled in the Copper tubing at a mild positive pressure and must be kept bleeding out continuously, to prevent any oxidation of parent material.
9. After tubing work, each circuit should be pressure tested as per the system manufacturer's recommendation and as per the procedure described in the following paragraphs. A certificate mentioning the test pressure, time of first and final pressure readings, make, model, serial number, range and least count of the gauge used, along with a copy of valid calibration certificate must be maintained, duly signed by the inspecting technician, and client /PMC representative.
10. After pressure testing, insulation must be completed as per the material, make and thickness mentioned in the approved shop drawing. The joints of insulation must be sealed by minimum 50 mm wide Aluminium adhesive tape. Care should be taken to avoid any air gaps between tube / tube and insulation sleeves, and between two insulation sleeve joints.
11. Proper tagging must be carried out to trace the tubing to respective indoor and outdoor circuits.
12. The tubes exposed to sunlight must be covered / cladded / treated to prevent damage from UV radiation and bird pecks / tampering, as mentioned in the BOQ. The cladding should be made out of 26 G Aluminium sheet or G.S.S. sheet. While cladding, care should be taken to avoid penetrating the insulation by screws. Short screws Of metallic straps should be used for securing cladding sheets. Instead of cladding, glass cloth, with two coats of protective resin should be used.
13. While charging refrigerant, manufacturer's recommendations must be strictly followed, and charging must be carried out using proper charging hose, gauge manifold with calibrated gauges and electronic weigh scale. Further leak check using a gas leak detector should be carried out. Charging must be carried out after proper evacuation of the tubing. The quantity of refrigerant to be charged should be calculated by totalizing the liquid tube volume as per the manufacturer's recommendation.

A - 4 : RECOMMENDATIONS FOR PRESSURE TESTING:

Refrigerant tubes carry refrigerant at pressures different from atmospheric pressure. When pressure inside tubes is more than atmospheric pressure, refrigerant may escape to the atmosphere, causing commercial loss due to loss of refrigerant, inefficient system performance or even system breakdown and contamination of surroundings. When pressure inside the tubes is less than atmospheric pressure, such as in case of suction tubes of some low temperature refrigeration machines, or during pump-down cycle of normal air-conditioning systems, leakages in tubes leads to ingress of air and moisture, causing severe system damage. Therefore, it is a must that the refrigerant tubing is thoroughly tested for leakages. Pressure testing for any tubing must be carried out at a pressure higher than the maximum operating pressure within the system. It is recommended that the pressure recommended by manufacturer be followed very strictly. Testing at lower pressures may lead to non-detection of some small leakages, while testing at higher pressures may lead to damage to some factory manufactured components within the system. Generally, for R-410 systems a pressure of around 650psig is used. Nitrogen is the most common gas used for carrying out pressure testing. It has numerous advantages, some of which are listed below:

1. Nitrogen is easily available as a commercial gas packed in easy to handle cylinders.
2. Nitrogen, being the most abundant component of the atmosphere, is safe for leaking out without contaminating the atmosphere.
3. Nitrogen is less costly as compared with other gases.
4. Nitrogen is safe for handling and testing.
5. Nitrogen does not readily react with system components Pressure gauge/s used for testing must be calibrated and a calibration certificate with traceability to a Government(National) Physical Laboratory must be documented. The gauge should be capable of measuring pressure at least 10% above the reading to be recorded.

A - 5 : PROCEDURE FOR CARRYING OUT PRESSURE TEST

- 1) Ensure that the tubing to be tested is properly secured/supported and the openings have been sealed off as per manufacturer's recommendation.
- 2) Install pressure gauge/s at strategic location/s where it shall not be tampered with, at the same time, should be easily visible.
- 3) Install a valve and connecting tubing so that the open end of the tube reaches the cylinder outlet without moving the cylinder.
- 4) Connect the tube to the cylinder and after ensuring proper connection, crack open the cylinder valve, keeping an eye on the pressure gauge. Let the pressure rise to around 10 psig.
- 5) Check for proper sealing of all flanged / flare nut joints or valves/ valve glands looking for noise of escaping Nitrogen and seal same.
- 6) Open the cylinder valve again and raise the pressure to 200 psig.
- 7) Check the tube line for major leakages at brazed joints, elbows, valve glands, equipment end connections and tube seams with the help of soap water. Make up the leaks by tightening nuts. If the leaks are in brazed joints, flush out Nitrogen and carry out necessary re-brazing.
- 8) Open the cylinder valve again and increase the pressure to 150 psig less than the final test pressure. Repeat leak check as above.
- 9) Open the cylinder valve again and slowly raise the pressure to the manufacturer recommended pressure. Carry out a thorough leak check.

10) Record the pressure and time. Let the pressure stand for 24 hours without tampering. Check the pressure again after 24 hours. If pressure has dropped, the tubing should be checked very thoroughly for minor leakages. It is important to follow this 24 hours period as it gives enough time to detect minute leakages, and it removes the doubt created by thermal expansion of Nitrogen (as after exact 24 hours, ambient conditions are generally same).

11) In case of tubing extending to lengths more than 30 m and / or having more than 20 site fabricated joints, the pressure should be recorded after 24 hours as well as after 48 hours, so that all leakages are detected and made up.

12) After detecting and making up any leak, the pressure testing must be carried out once again from beginning.

A - 6 : DOCUMENTATION RECOMMENDED FOR ENSURING PROPER QUALITY ASSURANCE:

1. Manufacturer’s certificate with every Delivery Challan declaring composition of parent material
2. Signed and approved Shop drawings approved by Architect, prior to start of work
3. Pressure test report signed by Architect/ Client / Equipment manufacturer / PMC / Consultant.
4. False Ceiling closure check list duly signed by Architect / Client / Equipment manufacturer/ PMC /Consultant.

GENERAL:

ACR GRADE COPPER TUBES AND FITTINGS : SIZES AND SPECIFICATIONS

Tube material Specification :

(CFC- free refrigerant compatible tubes produced using Total loss lubricants)

1. De-oxidized High Phosphorized copper (DHP grade) raw material, with Chemical composition of Copper = 99.9 % ; Phosphorus = 0.015 to 0.040 %
2. RoHS Compliant
3. 360 degree concentric Wall thickness along the entire length of the tubes
4. Half hard drawn copper tubes should confirm to ASTM B75/ASTM280 (C12200) / JIS H:3300(C1220) / BS2871 part 3 (C106). Use Half Hard Temper Type for tube sizes above 19.1 mm.
5. Soft copper tubes, bright annealed (mirror finish) should confirm to ASTM B68 / JIS H:3300
6. Super clean quality with low residual content below the permissible levels of 0.038 g/m² for compatibility with use of CFC-free refrigerant.
7. 100 % Eddy Current Tested Tubes are to be used
8. Proper packaging, Storage and Traceability of the tubes.

Copper tube and Fittings Sizes and Insulation Specifications for CFC-free Refrigerant.

S. No.	OUTER DIAMETER IN INCH & (MM)	WALL THICKNESS IN GAUGE & (MM)	LENGTH IN FEET & (MTRS.)	TEMPER	WEIGHT PER METER (kg.)	SOCKET AND ELBOW THICKNESS IN	RUBBER INSULATION THICKNESS
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						SWG & (MM)	
1.	1/4" (6.4 mm)	21 (0.8 mm)	50' (15.24)	Soft	0.1265	18 (1.2mm)	15mm
2.	3/8" (9.5 mm)	21 (0.8 mm)	50' (15.24)	Soft	0.199	18 (1.2mm)	15mm
3.	1/2" (12.7 mm)	21 (0.8 mm)	50' (15.24)	Soft	0.2714	18 (1.2mm)	15mm
4.	5/8" (15.9 mm)	19 (0.99 mm)	50' (15.24)	Soft	0.4241	18 (1.2mm)	15mm
5.	3/4" (19.1 mm)	19 (0.99 mm)	50' (15.24)	Soft	0.5147	18 (1.2mm)	20mm
6.	1/4" (6.4 mm)	21 (0.8 mm)	12' (3.658)	Half Hard	0.1265	18 (1.2mm)	15mm
7.	3/8" (9.5 mm)	21 (0.8 mm)	12' (3.658)	Half Hard	0.199	18 (1.2mm)	15mm
8.	1/2" (12.7 mm)	21 (0.8 mm)	12' (3.658)	Half Hard	0.2714	18 (1.2mm)	15mm
9.	5/8" (15.9 mm)	19 (0.99 mm)	12' (3.658)	Half Hard	0.4241	18 (1.2mm)	15mm
10.	3/4" (19.1 mm)	21 (0.8 mm)	12' (3.658)	Half Hard	0.4164	18 (1.2mm)	20mm
11.	7/8" (22.2 mm)	21 (0.8 mm)	12' (3.658)	Half Hard	0.489	18 (1.2mm)	20mm
12.	1.0" (25.4 mm)	20 (0.88 mm)	12' (3.658)	Half Hard	0.6054	18 (1.2mm)	20mm
13.	1 1/8" (28.6 mm)	19 (0.99 mm)	12' (3.658)	Half Hard	0.7865	18 (1.2mm)	20mm
14.	1 1/4" (31.8 mm)	18.5 (1.1 mm)	12' (3.658)	Half Hard	0.843	16 (1.6mm)	20mm
15.	1 3/8" (34.9 mm)	18 (1.21 mm)	12' (3.658)	Half Hard	1.155	16 (1.6mm)	20mm
16.	1 1/2" (38.1 mm)	17.5 (1.3 mm)	12' (3.658)	Half Hard	1.340	16 (1.6mm)	20mm
17.	1 5/8" (41.3 mm)	17 (1.43 mm)	12' (3.658)	Half Hard	1.594	16 (1.6mm)	20mm

Use Soft tube only for Indoor Unit Connection

10. INSULATION TO REFRIGERANT PIPING:

FR nitrile rubber / cross linked closed cell polyethylene tube insulation of 13mm upto 1" dia pipes and 19mm thick for 1" and above shall be used for copper piping both for suction line and liquid line. All joints shall be sealed with self-adhesive tape or with heat.

11. COMMUNICATION CABLE AND CONTROL CABLING:

Communication cable and control cabling: Communication cable and control cabling should be of non-polar shielded 2 core cable shall be laid in 20 mm dia PVC conduits of required size. PVC conduit should be clamped neatly maintaining a distance from power cables, Cable terminations and dressing shall be done properly and neatly.

12. DRAIN PIPING:

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 black cotton tape.

3.0 FILL THE TECHNICAL DETAILS FOR ALL OUTDOOR AND INDOOR UNITS

TECHNICAL DETAILS FOR OUTDOOR UNIT			
S.No	Parameter	Unit	Details
1	Make and Origin		
2	Model	Model	
3	Capacity	HP	
4	Operating Ambient Temperature Range	degC	
5	Power Supply		
6	Refrigerant		
7	Refrigerant Precharge Quantity		
8	Number of compressors		
9	Compressor Type		
10	Cooling Capacity	Kw	
11	Cooling Capacity	BTU/HR	
12	Power Input	Kw	
13	Tonnage	TR	
14	EER		
15	ISEER		
16	IKW / TR	Kw	
17	Dimension (In MM)	H x W x D	
18	Net weight	Kg	
19	Shipping Weight (apprx)	Kg	
20	Refrigerant pipe connections		
21	Liquid		
22	Gas		
23	Air cooled condenser		
24	Type		
25	Fan Type		
26	Number of fans		
27	Air Quantity	CFM	
28	Motor Type		

TECHNICAL DETAILS FOR INDOOR UNIT			
S.No	Paramater	Unit	Details
1	Tonnage		
2	Make and Origin		
3	Model	Model	
4	Airflow Rate	CFM	
5	Number of speeds		
6	External static	Pa	
7	Capacity at nominal conditions (TR)		
8	Temperature control		
9	Refrigerant control		
10	Operating sound	dB	
11	Power Input	Kw	
12	Number of fan motor in evoporating and rating		
13	Casing material and finish		
14	Dimension in mm	H x W x D	
15	Net weight	Kg	
16	Filter material and rating		
17	Evaporator copper tube size & thickness (OD) and refrigeration		
18	Surface area on air side and refrigeration		

Note : Bank reserves the right for rejection of any offer in case technical details of the product offered to us are not suitable to our requirements .

SCHEDULE OF APPROXIMATE QUANTITIES AND RATE

1. The quantities given herein are those upon which the lumpsum cost of the work is based. They are subjected to alterations omissions, deductions or additions as provided for in the conditions of this contract and do not necessarily show the actual quantities of the work to be done. The unit rate noted below are those governing payment of extras or deductions for omissions, according to the conditions of the contract as set forth in the preliminary specifications of the Telangana state. Detailed standard specifications and other conditions or specifications of this contract.
2. It is to be expressly understood that the measured work is to be taken net (notwithstanding) any custom or practice to the contrary according to the actual quantities when in place and finished according to the drawings or as may be directed from time to time by the Architects, and the cost calculated by measurements or weight, at the respective prices, without any additional charge for any necessary or contingent works connected there with. The rates quoted are for work in site and complete in every respects.
3. If any operation of work, which is specified in the respective items mentioned in the schedule of quantities, is not executed by the contractor then proportionately the rate quoted in the schedule shall be refixed.

SAFETY CODE

1.1 Scaffolds:

- 1.1.1 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 material as well, suitable footholds and hand holds shall be provided on the ladder and the ladder shall be given an inclination not steeper than 1/4 to 1 (1/4 horizontal and 1 vertical)
- 1.1.2 Scaffolding or staging more than 4m. above the ground or floor, 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 3 feet high above the floor or platform of such scaffoldings or staging and extending along the entire length of the outside and ends there of with only such opening 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.
- 1.1.3 Working platform, gangways, and stairways should be so constructed that they should not sag unduly or unequally, and if the height of the platform or the gangway or the stairway is more than 3.6m above the ground level on the floor level. They shall be closely boarded, should have adequate width and should be suitably fastened, as described in (ii) above.
- 1.1.4 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 1m. Wherever there are open excavations in ground, they shall be fenced off by suitable railing and danger signals installed at night so as to prevent persons slipping into the excavations.
- 1.1.5 Safe means of access shall be provided to all working platforms and the working places. Every ladder shall be securely fixed. No portable single ladder shall be over 9 m. in length while the width between side rail in rung ladder width shall in no case be less than 290mm. for ladder upto and including 3m. in length. For longer ladders this width should be increased at least 20mm. for each additional meter or length.
- 1.1.6 A sketch of the ladders and scaffolds proposed to be used shall be prepared and approval of the Engineer-in-charge obtained prior to construction.
- 1.1.7 All personnel of the Contractor working within the plant site shall be provided with safety helmets. All welders shall wear welding goggles while doing welding work and all metal workers shall be provided with safety gloves. Persons employed on metal cutting and grinding shall wear safety glasses.
- 1.1.8 Adequate precautions shall be taken to prevent danger from electrical equipment. No materials on any of the sites of work shall be so stacked or placed as to cause danger or inconvenience to any person or the public.

1.2 Excavation and Trenching:

- 1.2.1 All trenches, 1.25m or more in depth, shall at all times be supplied with at least one ladder for each 30m in length or fraction thereof. Ladder shall be extended from bottom of the trench to at least 1m. above the surface of the ground. The side of the trench which are 1.5m or more shall be sloped back to give suitable slope or securely held by timber bracing, so as to avoid the dangers of sides to collapse. The

excavated material shall not be placed within 1.5m. of the edges of the trench or half of the depth of the trench whichever is more. Cutting shall be done from top to bottom. Under no circumstances undermining or undercutting shall be done.

- 1.2.2 The Contractor shall take all measures on the site of work to protect the public from accidents and shall be bound to bear the expenses of defence of every suit, action or other proceedings at law that may be brought by any person for injury sustained owing to neglect of the above precautions and to pay any such persons or which may with the consent of the Contractor, be paid to compromise any claim by any such person.

1.3 Demolition:

- 1.3.1 Before any demolition work is commenced and also during the process of the work.

1.3.1.1 All roads and open areas adjacent to work site shall either be closed or suitably protected;

1.3.1.2 No electric 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.

1.3.1.3 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 overloaded with debris or materials as to render it unsafe.

1.4 Personal Safety Equipments:

1.4.1 All necessary personal safety equipment as considered adequately by the Engineer should be kept available for the use of the person 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 these concerned.

1.4.2 Worker employed on mixing asphaltic materials, cement and lime mortars shall be provided with protective footwear and protective goggles.

1.4.3 Those engaged in white washing and mixing or stacking of cement bags or any material which is injurious to the eyes shall be provided with protective goggles.

1.4.4 Stone breakers shall be provided with protective goggles and protective clothing and seated at sufficiently safe intervals.

1.4.5 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 manhole's so opened shall be cordoned off with suitable railing and provided with warning signals or boards to prevent accident to the public.

1.4.6 The Contractor shall not employ men below age of 18 years and women on the work of painting with products containing lead in any form. Where ever men above the age of 18 years are employed on the work of lead painting, the following precautions should be taken.

1.4.5.1 No paint containing lead or products shall be used except in the form of paste or readymade paint.

1.4.5.2 Overalls shall be supplied by Contractors to the workmen and adequate facilities shall be provided to enable the worker painters to wash during the cessation of work.

1.4.6 When the work is done near any place where there is risk of drowning, all necessary equipment should be provided and kept ready for use and all necessary steps taken for prompt rescue of any person in danger and adequate provision should be made for prompt first aid treatment of all injuries likely to be sustained during the course of the work

1.5 Hoisting Machines:

1.5.1 Use of hoisting machines and tackle including their attachment, anchorage and supports shall

conform to the following standards or conditions:

1.5.1.1 These shall be good mechanical construction, sound material and adequate strength and free from patent defect and shall be kept in good repair and in good working order.

1.5.1.2 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.

1.5.2 Every crane driver or hoisting applications operator shall be properly qualified and no person under the age of 21 years should be in charge of any hoisting machine including any scaffolding which give signals to operator.

1.5.3 In case of every hoisting machine and of every chain, hook, shackle swivel and fully block used in hoisting or as means of suspension for safe working load shall be ascertained by adequate means. Every hoisting machine and all gear referred to above shall be plainly marked with the safe working load. In case of a 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 any gear referred to above in this paragraph shall be loaded beyond the safe working load except for the purpose of testing.

1.5.4 In case of department machines, the safe working load shall be notified by the Engineer-in-Charge. As regards Contractors machines the Contractor shall notify the safe working load to the machine to the Engineer-in-Charge whenever he brings any machinery to site of work and get it verified by the Engineer-in-charge concerned.

1.5.5 Motors, gearing transmission, electric wiring and other dangerous parts of hoisting, appliances should be provided with efficient safe guards 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. When workers employ on electrical installations 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 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.

1.5.6 To ensure effective enforcement of the rules and regulations relating to safety precautions, the arrangements made by that Contractor shall be open to inspection by the Labour Officer, Engineer-in-Charge of the department or their representatives.

Notwithstanding the above clauses from 9.5.1 to 9.5.5 there is nothing in these to exempt the Contractor from the operation of any other Act or Rule in force in the Republic of India.

MODEL RULES FOR THE PROTECTION OF HEALTH AND SANITARY ARRANGEMENTS FOR WORKERS EMPLOYED BY CONTRACTORS

10.1 Application:

These rules shall apply to the Contractor for **TENDER FOR PROPOSED VRV/VRF AIR CONDITIONING WORKS IN FIRST, SECOND, THIRD, OFRTH & FIFTH FLOORS AT BANKS KOTI BUILDING,KOTI HYDERABAD, TELANGANA STATE.**

10.1.1 "Work Place" means a place at which, at an average 50 or more workers are employed in connection with construction work.

10.1.2 "Large Work Place" means a place at which, at an average 500 or more workers are employed in connection with construction work.

10.2 First Aid:

10.2.1 At every work place, there shall be maintained in a readily accessible place first aid appliance including an adequate supply of sterilized dressings and sterilized cotton wool. The appliances shall be kept in good order and, in large work place they shall be placed under the charge of a responsible person who shall be readily available during the working hours.

10.2.2 At large work places, where hospital facilities are not available within easy distance of the work. First Aid post shall be established and be run by a trained compounder.

10.2.3 Where large work places are remote from regular hospitals, indoor ward shall be provided with one bed for every 250 employee.

10.2.4 Where large work places are situated in cities, in towns or in their suburbs and no beds are considered necessary owing to the proximity of city or town hospitals, suitable transport shall be provided to facilitate removal of urgent cases to the hospitals. At other work places, some conveyance facilities, such as a car, shall be kept readily available to take injured person or persons suddenly taken seriously ill to the nearest hospital.

10.3 Drinking Water:

10.3.1 In every workplace, there shall be provided and maintained at suitable places easily accessible to labour, a sufficient supply of cold water fit for drinking.

10.3.2 Where drinking water is obtained from an intermittent public water supply, each work place be provided with storage where such drinking water shall be stored.

10.3.3 Every water supply storage shall be at a distance of not less than 15m. from any latrine, drain or other source of pollution. Where water has to be drawn from an existing well which is within such proximity of latrine, drain or any other source of pollution, the well shall be properly chlorinated before water is drawn from it for drinking. All such wells shall be entirely closed in and be provided with a trap door which shall be dust and water proof.

10.3.4 A reliable pump shall be fitted to each covered well the trap-door shall be kept locked and opened only for cleaning or inspection which shall be done at least once in a month.

10.4 Washing and Bathing place:

10.4.1 Adequate washing and bathing places shall be provided, separately for men and women.

10.4.2 Such places shall be kept in clean and drained condition.

10.5 Scale of Accommodation in Latrines and Urinals:

There shall be provided within the precincts of every work place latrines and urinals in an accessible place, and the accommodation, separately for each for each of them, shall not be less than the following scale:

	No. of Seats
10.5.1 Where the number of persons does not exceeds 50,	2
10.5.2 Where the number of persons exceeds 50 but does not exceed 100	3
10.5.3 For every additional 100	3 per 100

10.6 Latrines and Urinals for Women:

If women are employed separate latrine and urinals, screened from those of men and marked in the vernacular in conspicuous letter. "For Women Only" shall be provided on the scale laid in 6.0. Those for men shall be similarly marked "For Men Only". A poster showing the figure of a man and a woman shall also be exhibited at the entrance of latrines for each sex. There shall be adequate supply of water close to the urinals and latrines. laid in 6.0 Those for men shall be similarly marked "For Men Only". A poster showing the figure of a man and a woman shall also be exhibited at the entrance of latrines for each sex. There shall be adequate supply of water close to the urinals and latrines.

10.7 Latrines and Urinals:

Except in work places provided with water flushed latrines connected with a water borne sewerage system, all latrines shall be provided with receptacles on dry earth system which shall be cleaned at least four times daily and at least twice during working hours and kept in a strictly sanitary condition. The receptacles shall be tarred inside and outside at least once a year.

10.8 Construction of Latrines:

The inside walls shall be constructed of masonry or some suitable heat-resisting non-absorbent material and shall be cement-washed inside and outside at least once a year. The dates of cement washing shall be noted in a register maintained for the purpose and kept available for inspection. Latrines will not be of a standard lower than borne-hole system and should have thatched roofs.

10.9 Disposal of Excreta:

Unless otherwise arranged for by the local sanitary authority arrangements for proper disposal of excreta shall be made by septic tank or leach pit duly approved by the Engineer and in conformity with the requirements of local public health authorities.

10.10 Provision of Shelters during rest:

At every work place there shall be provided, free of cost, two suitable sheds one for meals and the other for rest separately for men and women for the use of labour. The height of the shelter shall not be less than 11 feet from the floor-level to the lowest part of the roof. The sheds should be roofed with at least thatch and mud flooring will be provided with a dwarf wall around not less than 750mm. Sheds should be kept clean and the space should be on the basis of at least 0.50 Square meters per head.

10.11 Creches:

10.11.1 At every work place, at which 50 or more women workers are ordinarily employed there shall be provided two huts for the use of children under the age of 6 year belonging to such women. One hut shall be used for infant's games and play and the other as their bed-room. The huts shall not be constructed on a lower standard than the following:

- 10.11.1.1 Thatched roofs:
- 10.11.1.2 Mud floor and walls:
- 10.11.1.3 Planks - spread over the mud floor and covering matting.

The huts shall be provided with suitable and sufficient openings for light and ventilation. There shall be adequate provision of sweepers to keep the place clean. There shall be two ayahs in attendance. Sanitary utensils shall be provided to the satisfaction of the Health Officer of the area concerned. The use of the hut shall be restricted to children their attendants and mothers of the children.

10.11.2 Where the number of women workers is more than 25 but less than 50, the Contractor shall provide at least one hut and one ayah to look after the children of women workers.

10.11.3 The size of creche or creches shall vary according to the number of women workers.

10.11.4 The creches or creche shall be properly maintained and necessary equipment like toys, etc. shall be provided.

Additional Terms & Conditions for comprehensive maintenance

1. A separate supplementary agreement shall be made with the successful tenderer for Comprehensive maintenance of the installed HVAC systems.

2. Original Manufacturing Company shall undertake annual maintenance contract.

3. The scope of work shall be following:

1. The contractor shall execute the work i.e. "Comprehensive Maintenance and Operation of digital scroll, VRF/ VRV Air conditioning system"

2. The scope of maintenance includes running of complete air-conditioning system including all items related with comprehensive maintenance of the VRF/ VRV Air conditioning system with specified maintenance schedule. Repair & replacement of defective components, providing of spares and all other associated accessories which are not covered otherwise and attention of all types of defects, necessary for smooth operation of the HVAC system to the satisfaction of Engineer-in Charge. The Contractor should also carry out any other schedule jointly decided by Engineer-in-charge and the contractor for any equipment of the VRF/ VRV Air conditioning system to ensure smooth and trouble free operation.

4. Comprehensive & routine maintenance :

4.1 Preventive & Breakdown maintenance including Daily, Weekly, Monthly, Quarterly and Yearly maintenance of the VRF/VRV HVAC system. Comprehensive maintenance also includes repair of defective system with provision of spares as required. No extra payment will be made for supply/replacement of spares.

4.2 Maintenance of complete VRF/VRV HVAC system so that performance of the plant is satisfactory.

4.3 Indoor Units (IDUs) of various type/size complete with display, electronic/PCB cards, cordless/ corded remote control, internal control/power wiring, regular cleaning of filters, fan motor & any other associated work for proper & specified functioning of indoor units.

4.4 Outdoor Units (ODUs) of various capacities with associated compressor, supply/filling of compressor oil, etc., Inverters, Digital Scroll system, electronic/PCB cards, MCB/MCCB,IGBT, control/power wiring, oil recovery system, heat exchanger, condenser motor fan, internal refrigeration circuit & any other associated work for proper & specified functioning of outdoor units.

4.5 Refrigerant piping along with all joints etc. including detection/ repairing of leakage, pressure testing, vacuum purging, gas recharging/ topping including supply of refrigerant.

4.6 The repair work shall be carried out in a professional manner. This shall also include restoration of insulation after repair. Any other associated work for proper & specified functioning of air conditioning system. The scope also includes supply & charging of refrigerant due to any unforeseen circumstances.

4.7 Condensate drain water pipe cleaning, detection/repairing of pipes for any leakages, insulation etc. Any other associated work for proper functioning of drain water disposal system.

4.8 All control & power wiring between indoor & outdoor units. Any other associated work for proper & specified functioning of air conditioning system.

4.9 Maintenance & upkeep of sub-AC panels on the roof including switchgear, cabling from sub-AC panel up to outdoor units, consumables etc (excluding incoming cables to sub-Ac panels)

4.10 Any other item/activities associated with proper functioning of comprehensive maintenance complete air conditioning system deemed to have been included in the scope of work.

4.11 In order to attend breakdowns of the AC system, the engineering works (eg. False ceiling, any kind of structural/masonry work, opening and closing) required if any, shall be in the scope of work.

4.12 While replacement of MCB at ODU; all incoming and outgoing connections shall be in the scope of work.

5. Deployment of maintenance staff:

The contractor will depute technically qualified, competent and experienced staff in adequate number for the comprehensive maintenance. It may however be noted that normally scheduled maintenance should be carried out on Saturday & Sunday or any Gazetted Holidays for which the contractor will give at least 24 hours advice to the Engineer-in-Charge.

6. Attending to complaints:

6.1 List of minimum spares to be available at site for smooth operation shall be prepared within 07days of start of work and accordingly all spares shall be available within 15 days of start of Contract.

6.2 All defects and deficiencies should be rectified promptly after lodging of complaint. The complaint can be lodged through telephonic message or through complaint register kept at site in designated place.

6.3 Above healthy spares, refrigerant & necessary programmable PCB cards shall be maintained in sufficient quantity to reduce down time of the system. The spares shall be of OEM/same make. Where the Make of item is not identified/defined, it shall be of reputed make with the approval of Engineer-in-charge. In case the above spares (quantities) are not maintained at site, by the Contractor, the stores would be purchased by Bank and the cost of purchase shall be deducted by from the bills for payment to the Contractors.

7. Maintenance schedules:

7.1 In addition to attending to complaints, the contractor will be required to carry out prescribed daily, monthly, quarterly, half-yearly, yearly maintenance schedules. The maintenance schedules and the work to be done in each schedule & report format shall be jointly decided by the Engineer-in-Charge & the Contractor.

7.2 A proper record of maintenance scheduled should be kept; the Contractor & Engineer-in-Charge shall jointly record the details of maintenance schedule in the register meant for it. The register shall be updated and ready for check at any time.

8. While entering into maintenance contract, the vendor shall submit performance Bank Guarantee @ 5% of accepted AMC amount for that particular year IN ADVANCE .

LIST OF APPROVED MANUFACTURERS / NATURAL SOURCES OF MATERIALS TO BE USED IN

S.No.	Material Name.	Brand / Manufacturer / Recommended Make.
1.	VRV/F Out Door Unit	Mitsubishi Heavy, Mitsubishi Electric, O-General, Daikin, Hitachi , Bluestar, Voltas, Carrier, LG
2.	VRV/F- Indoor Units Cassette Type	Mitsubishi Heavy, Mitsubishi Electric, O-General, Daikin, Hitachi , Bluestar, Voltas, Carrier, LG
3	VRV/F-Indoor Units Hi Wall Type	Mitsubishi Heavy, Mitsubishi Electric, O-General, Daikin, Hitachi , Bluestar, Voltas, Carrier. LG
4	Hi-Wall Split AC Units	Mitsubishi Heavy, Mitsubishi Electric, O-General, Daikin, Hitachi , Bluestar, Voltas, Carrier, LG
5	Cassette AC Units	Mitsubishi Heavy, Mitsubishi Electric, O-General, Daikin, Hitachi , Bluestar, Voltas, Carrier, LG
6	Refrigerant Joints / Multi kits	Mitsubishi Heavy, Mitsubishi Electric, O-General, Daikin, Hitachi , Bluestar, Voltas, Carrier
7.	Refrigerant Piping	Mandev / Rajko
8.	Drain Piping	Mandev / Rajko/Sudhakar pvc
9.	Nitrille Rubber Insulation	Aerolam / Armacell / Trocellene
10.	Control cum Transmission wiring	Delton/ Finolex/Polycab
11.	Cable Tray	MEK/ Indian/ Patney
12.	Software Integration	Mitsubishi Heavy, Mitsubishi Electric, O-General, Daikin, Hitachi , Bluestar, Voltas, Carrier

NOTE :

1. The contractor shall be use above mentioned materials only. All other materials shall confirm to the specifications laid down. The tenderer shall take this into account while tendering rates / prices. The Architect has got every right to select any of the above Makes for the Project. However, the samples of every material including all fixing accessories shall be got approved by Architect before Execution.

2. The contractor / Vendor shall submit Detailed shop drawings on the drawings provided by Architect Consultant. After taking approval from the architect consultant on the detailed shop drawings submitted, the work shall be started.

ALL MAKE SHALL BE CONFIRMING TO BIS ONLY.



Tender Ref. No. CO/Annex-Hyd/SSD/3/2023-24

Dt. 05.01.2023


**SUBJECT: REPAIR/RENOVATION AND REFURBISHING WORKS AT
BANKS KOTI BUILDING**

**TENDER FOR PROPOSED VRV / VRF AIR CONDITIONING WORKS IN
FIRST, SECOND, THIRD, FOURTH AND FIFTH FLOORS AT BANKS
KOTI BUILDING KOTI HYDERABAD, TELANGANA STATE.**

PART-2

PRICE BID

Date of issue of Tender	: 05.01.2023 to 25.01.2023 During office hours.
Last date for submission of tender	: 25.01.2023 up to 3.00 pm.
Opening of Bid	: 25.01.2023 at 4.00 pm.
Pre bid Meeting	: 17.01.2023 at 4.00 pm.

<p>Owner: CHIEF MANAGER Union Bank of India, Support Services Department, 5-9-11, Dr.Pattabhi Bhavan, Secretariat Road, Saifabad, Hyderabad, 500004. Ph:040-23252439/2444</p>	<p>Consultant:  Architects, Interiors Designers, Valuers, Urban Planners, Project Managers #3-6-134, FLAT NO 302, SVC-ROYAL DM apartments, Street no 18, Himayatnagar, Hyderabad. Ph. 040-35561296 abhikramarchitects@gmail.com</p>
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**PRICE BID (EXCLUSIVE OF GST)
BOQ FOR PROPOSED VRV / VRF AIR CONDITIONING WORKS IN FIRST
,SECOND,THIRD, FOURTH AND FIFTH FLOORS AT BANKS KOTI BUILDING KOTI
HYDERABAD, TELANGANA STATE.**

S.NO	DESCRIPTION	UNIT	QTY	RATE	RATE IN WORDS	AMOUNT
A	PART - A - HIGH SIDE					
1	Condensing Unit (Outdoor Unit):					
	The condensing unit shall be capable of assessing the requirement of liquid refrigerant flow of each evaporating unit at all times by means of a micro computer control expansion valve and generating the required total flow of refrigerant liquid for supply to the evaporator units. The condensing unit shall be modular type, designed as per Indian atmospheric conditions and should be capable to perform for outside ambient 50 Deg. C. Outdoor Units should be modular in type and should be equipped with DIP IPM type Inverter Scroll Compressor, Inverter with variable speed compressors capable of changing the capacity in accordance to the cooling load requirement with highest COP/EER. Provision of setting External Static Pressure up to 60Pa by on site. Unit COP/EER should be high and designed for cooling operation for highest ambient Temperature as per Indian atmospheric conditions.					
	Set of Outdoor Unit should be able to connect up to 64 Indoor Units. Outdoor unit should consists of DC variable speed motor for condenser fan with minimum 25 steps speed control to reduce input power, auto check function for connection error, auto address setting. Unit should be equipped with a double stage highly efficient oil separation management system to ensure minimum oil entrenchment and proper lubrication with high reliability and stable operation with long refrigerant piping. The noise level of the base unit shall be less than 60dB (A) when measured horizontally 1 m away from cover surface and 1.5 m above floor level during night shift. Unit should assess demand function automatically and perform with the help of Central Station. Units having Noise reduction mode will be preferred but must be having back up operation function for emergency to avoid complete stop. Outdoor unit should have feature of Rotation Operation function of Compressor to distribute load.					

	The condenser coil should be with internally grooved Cu tubes, mechanically bonded to super slit aluminum fins. The surface of the condenser coil shall be coated with suitable chemical coating to prevent deterioration due to climate. Outdoor unit must have automatic judgment function to check whether or not the refrigerant amount is sufficient in one refrigerant cycle. Reliable Transmission system should be used between outdoor and indoor units. All necessary safety devices shall be provided to ensure safe operation of the system.					
1.1	8 HP Outdoor Unit	Nos	2			
1.2	10 HP Outdoor Unit	Nos	6			
1.3	12 HP Outdoor Unit	Nos	7			
1.4	16 HP Outdoor Unit	Nos	4			
2	Supply of CASSETTE UNITS type indoor units comprising with pre-filter, fan section with low noise fan multi speed motor, coil section with DX coil, outer cabinet, drain water lift-up mechanism, insulation, pipe connections etc. of various capacities as per specifications and drawings. WITH CORDLESS REMOTE CONTROL					
2.1	1.0 Ton 4way Cassette	Nos	16			
2.2	1.5 Ton 4way Cassette	Nos	8			
2.3	2.0 Ton 4way Cassette	Nos	6			
2.4	2.5 Ton 4way Cassette	Nos	4			
2.5	3.0 Ton 4way Cassette	Nos	23			
2.6	4.0 Ton 4way Cassette	Nos	26			
3	SITC of the following capacities of Cassette Units(Gas -R 32/ R134A/R407/R410-Ozone Friendly and Non CFC Refrigerant) with necessary gas Top Up complete with inverter compressor, copper condenser, evaporator, vibration isolators, structural supports with required hard ware, control cable, etc.,					
3.1	1.5 Ton 4way Cassette (COMPACT SIZE)	Nos	2			
3.2	2.0 Ton 4way Cassette (COMPACT SIZE)	Nos	1			
4	SITC of following capacity of 5 Star rated Hi wall Units (R410-Ozone Friendly and Non CFC Refrigerant) with necessary Gas Top Up complete with inverter compressor, copper condenser, evaporator, vibration isolators, structural supports with required hardware, control cable , etc., (the rate should include necessary copper pipe upto 5.00m. length, Electrical cabling & drain 5 mtr each.)					
4.1	1.0 Ton Capacity in UPS Rooms	Nos	8			

5	Multi kits for Indoor units FOR BOTH LIQUID & SUCTION LINE. (only one unit will be considered for both suction and liquid lines)	Nos	66			
TOTAL AMOUNT -A						
B LOW SIDE WORKS						
1	Lifting, Shifting, Positioning & Installation of VRF Outdoor units (2no 8HP, 6no 10HP, 7no 12HP & 4no 16HP)	Nos	19			
2	Lifting, Shifting, Positioning, Installation, Commissioning and Testing of VRF Indoor units	Nos	83			
3	Vacuuming the system, Gas filling and topping up with R410-Ozone Friendly and Non CFC Refrigerant, pressure testing and commissioning of above system.	Per / HP	224			
4	Supply & installation of suction & discharge Hard copper Refrigerant piping with proper supports/hangers from ceiling/wall as required at site & approved by consultant & duly insulated with closed cell elastomeric nitrile insulation of 19mm thick for pipes above 1" and 13 mm thick for pipes below 1" as suggested by the manufacturer. (only one length will be considered for both suction and liquid lines)					
4.1	31.75 mm					
4.2	28.58mm					
4.3	25.4mm					
4.4	22.2mm					
4.5	19.05mm	Rmt	1366			
4.6	15.9mm					
4.7	12.7mm					
4.8	9.37 mm					
4.9	6.35mm					
5	SITC of 20 SWG soft copper piping with 9mm thk. Nitrile tube insulation aluminum foil 22G GI wire mesh, supports with required hardware etc.,(Refrigerant Piping -5Mtr within the supply) along with internal 3C Cable.					
5.1	6.50mm dia (Liquid line) For 1.0 TR Split, 1.50 TR & 2.0 TR Cassette Units.	Rmt	156			
5.2	15.88 mm dia (Suction line). For 1.0 TR Split, 1.50 TR & 2.0 TR Cassette Units.	Rmt	156			

6	Supply and Erection of hard PVC condensated drain piping with 9mm thick Nitrile insulated including support and wall opening of the following sizes etc..					
6.1	a) 40mm Dia	Rmt	329			
6.2	b) 32mm Dia	Rmt	440			
6.3	c) 25mm Dia	Rmt	440			
7.1	Supply and Laying of Control and communication cable and connecting the VRF IDUs and ODUs (control wiring using 2C X 1.5 Sq.mm copper cable) with conduit	Rmt	2009			
7.2	Supply and Laying of Control and communication cable and connecting the Invertor AC IDUs and ODUs (control wiring using 4C X 1.5 Sq.mm copper cable) with conduit	Rmt	209			
8	Timer for 1Tr Spilt ac's in UPS rooms	Nos	4			
9	UNDER DECK INSULATION FOR ROOF with 50mm thk glass wool with factory laminated aluminum foil as per the Directions.	Sqmt	670			
10	MS CATWALK 1000 - 1200MM Width					
	Providing fabricating, and installing of Catwalk for AC Outdoor units, Taking Supporting from the wall / RCC Beam with 50x50x 3mm thk MS angles, 50mmx 25mm x3 mm thk MS Sections as outer frames and 25mm X 3mm thk MS flat @ 150mm C/C both ways with suitable MS Railing of 900mm ht etc as directed by Architect. welding and/or bolting as required, erecting and fixing in position of made up of rolled or built up sections with moment or shear connections, shop/site fabricated including all accessories via nuts, bolts, cleasts, gussets, suspenders etc as per specification complete as directed by Architect. The rate to include for welding weights, site connection, nut & washer & bolts, scaffolding, working platform, excavation concrete etc.	Rmt	12			
11	Supply and fixing of following size GI perforated cable tray made out of 2mm thick galvanized sheet and the tray covered with 2mm thick cover including GI / MS supports for fixing the tray, anchor fasteners etc., complete as required. (For Copper pipes and PVC Pipes)					
	300mm wide	Rmt	285			
	TOTAL AMOUNT -B					
	TOTAL RUPEES (A+B)					

C	BUY BACK (EXCLUSIVE OF GST)					
1	Buyback of Existing 1.0TR, 1.5TR & 2.0TR Split AC units (indoor units , out door units, copper pipes including all accessories)	Nos	64			
2	Buyback of Existing 1.0TR, 1.5TR & 2.0TR Window AC units (indoor units , out door units, copper pipes including all accessories)	Nos	13			
3	Buyback of Existing 5.5 TR Ductable AC units (indoor units , out door units, GI Ducting, Grills, including all accessories)	Nos	2			
4	Buyback of Existing 8.5 TR Ductable AC units (indoor units , out door units, GI Ducting, Grills, including all accessories)	Nos	5			
	TOTAL BUY BACK (C)					

(*) Minimum cost of Rs 3 lacs LUMPSUM is stipulated as VALUE OF BUY BACK of AC units . Bids quoted less than this value will be disqualified .

(D) CAMC FOR THE AIR CONDITIONING UNITS						
S. NO	DESCRIPTION	UNIT	QTY	RATE	RATE IN WORDS	AMOUNT
1	Comprehensive annual maintenance charges AFTER WARRANTY PERIOD OF 2 YEARS To calculate Lowest Vendor, CAMC amount for 3 years shall be factored. (Total Five year) First and Second year will be warranty period and AMC will be calculated for next Three years after warranty. Cost shall be quoted exclusive of GST .					
1.1	CAMC for 1st Year after Warranty period For all VRF, Individual Cassette and Split unit AC's	HP	224			
1.2	CAMC for 2nd Year after Warranty period For all VRF, Individual Cassette and Split unit AC's	HP	224			
1.3	CAMC for 3rd Year after Warranty period For all VRF, Individual Cassette and Split unit AC's	HP	224			
	TOTAL RUPEES (D)					

SUMMARY SHEET for proposed VRV/VRF Air conditioning works at Koti Building

Sr no	Description	Total Amount in Rs	Total Amount in words
1	Total of High side work (part-A)		
2	Total of Low side work (part-B)		
3	Deduction: Discount offered, if any on sl no 1 & sl no 2		
4	Deduction: Buy Back of total Air conditioners (Part C) (*)		
5	Total of CAMC for 1 st , 2 nd & 3 rd Years after completion of warranty of two years (Part D)		
6	Grand Total (SL NO 1 + SL NO 2 - SL NO 3 - SL NO 4 + SL NO 5)		

(*) Note : Minimum cost of Rs 3 lacs LUMPSUM is stipulated as VALUE OF BUY BACK of AC units . Bids quoted less than this value will be disqualified .

Evaluation of CAMC Cost:

The tenderers / contractors shall furnish the CAMC charges in the price bid for 3 years (after 2 years warranty period) and terms of CAMC shall be furnished in the technical & commercial bid clearly furnishing the details regarding the scope of CAMC, details of spares, consumables & equipment's covered. Bank reserves the right for disqualification of any firm in case scope of camc / terms & conditions put forth by the firm are not acceptable to employer .

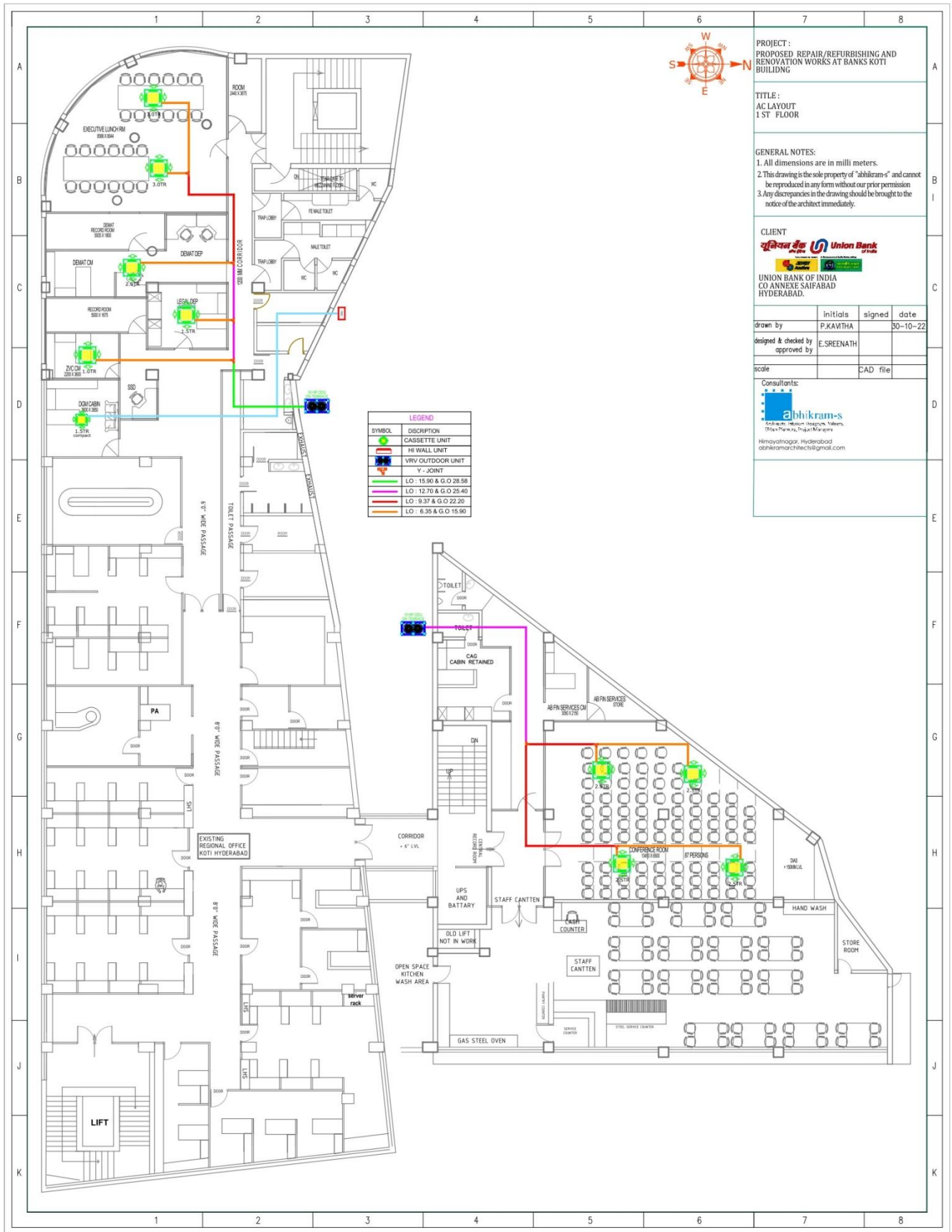
NOTE: In case the vendor quoted very low abnormal CAMC rates, Bank reserves the right to seek a additional Performance Guarantee to the extent of 10% of the total AMC amount.

NOTE : L1 shall be evaluated factoring in 3 years of CAMC after 2 years of Warranty.

NOTE : All the attached are tentative tender drawings.

NOTE : The contractor / Vendor shall submit Detailed shop drawings on the drawings provided by Architect Consultant. After taking approval from the architect consultant on the detailed shop drawings submitted, the work shall be started.

Note : Rates are invited exclusive of GST .





PROJECT :
 PROPOSED REPAIR/REFURBISHING AND RENOVATION WORKS AT BANKS KOTI BUILDING

TITLE :
 AC LAYOUT
 2ND FLOOR

GENERAL NOTES:
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 3. Any discrepancies in the drawing should be brought to the notice of the architect immediately.

CLIENT

 UNION BANK OF INDIA
 CO ANNEXE SAIFABAD
 HYDERABAD.

drawn by	initials	signed	date
P.KAVITHA			30-10-22









designed & checked by E.SREENATH
 approved by

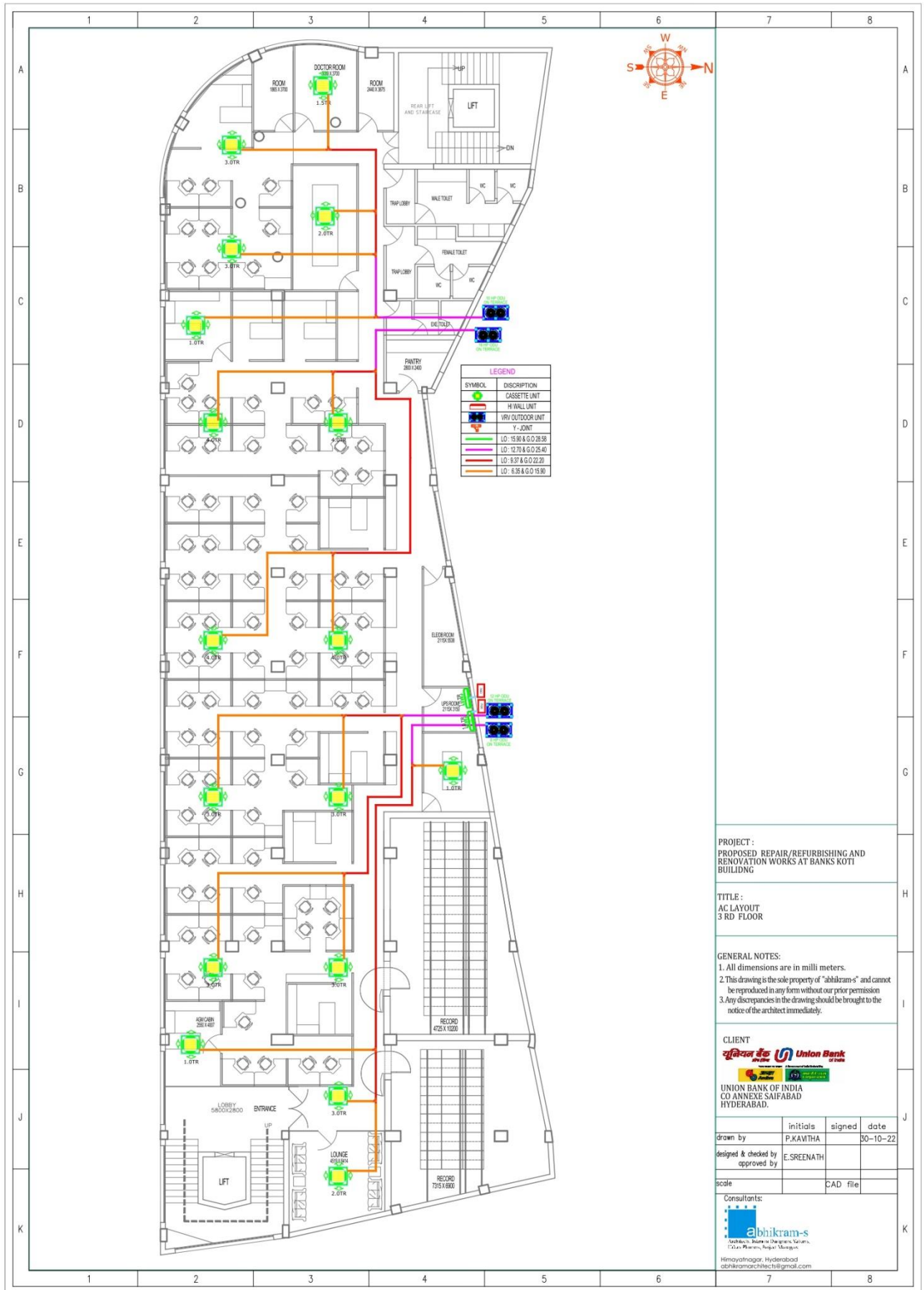
scale CAD file

Consultants:

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 500004, Hyderabad, India.
 Hingaythogor, Hyderabad
 abhikramarchitects@gmail.com

LEGEND

SYMBOL	DISCRPTION
	CASSETTE UNIT
	W WALL UNIT
	WRY OUTDOOR UNIT
	T-JOINT
	LO: 15.90 & G.O.28.58
	LO: 12.70 & G.O.25.40
	LO: 9.57 & G.O.22.20
	LO: 6.35 & G.O.15.90



PROJECT :
 PROPOSED REPAIR/REFURBISHING AND
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 BUILDING

TITLE :
 AC LAYOUT
 3RD FLOOR

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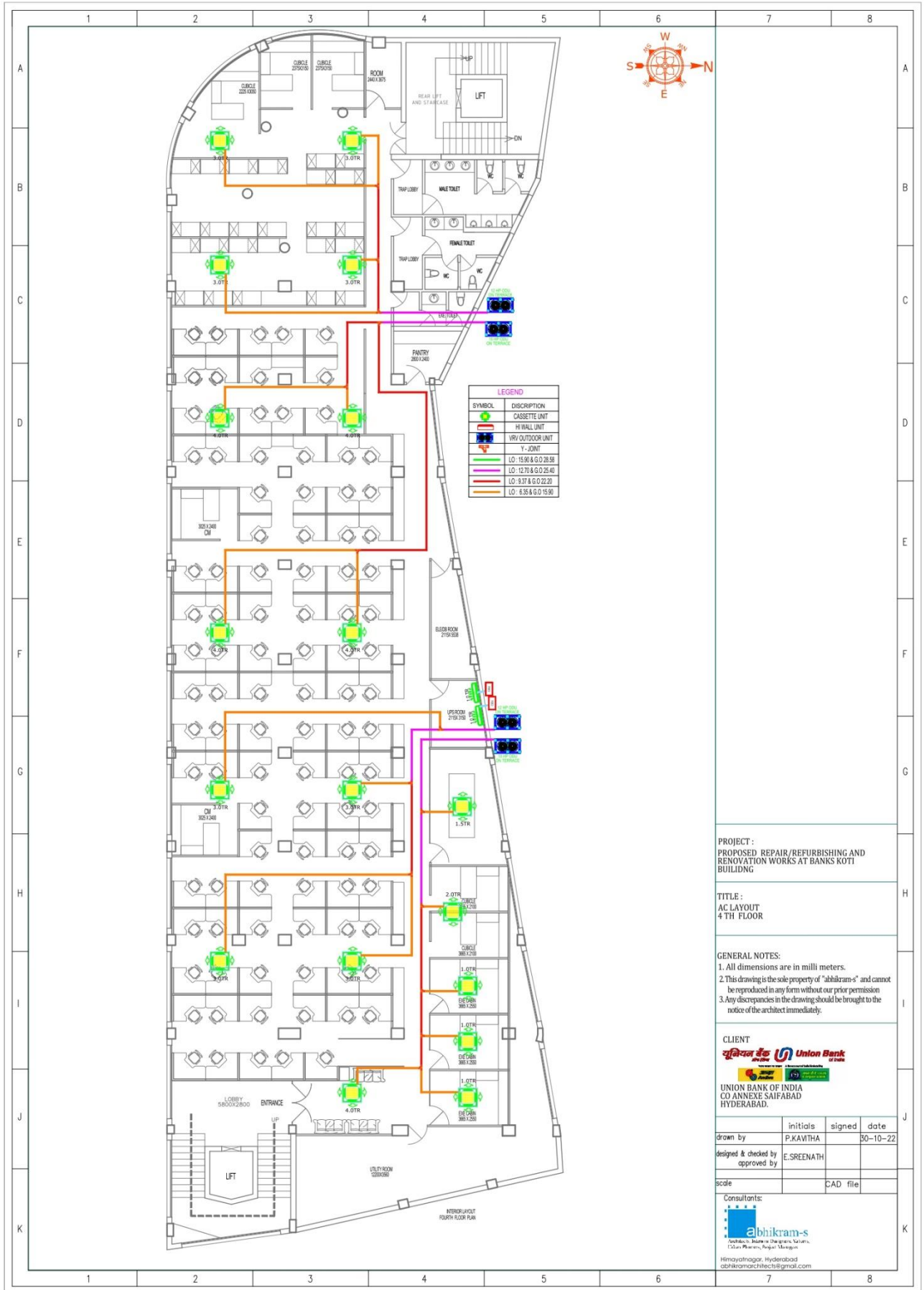
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 HYDERABAD.

drawn by	initials	signed	date
	P.KAVITHA		30-10-22
designed & checked by	E.SREENATH		
approved by			

scale: CAD file

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PROJECT :
PROPOSED REPAIR/REFURBISHING AND
RENOVATION WORKS AT BANKS KOTI
BUILDING

TITLE :
AC LAYOUT
4 TH FLOOR

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scale: CAD file

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