

**PROPOSED INTERIOR, FURNISHING, ELECTRICAL & AIR CONDITIONING  
WORKS**

ORGANIZATION



LOCATION

**NAGARI**

BRANCH TYPE

PROPOSED

TENDER INVITING AUTHORITY

THE GENERAL MANAGER  
Bank of Baroda,  
ZONAL OFFICE (HYDERABAD),  
D NO. 3-6-289, 1ST FLOOR,  
KAREEM MANZIL, OLD MLA QUARTERS,  
HYDERGUDA, HYDERABAD- 500029.

ARCHITECT



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TENDER ISSUE DATE

April 22, 2024

LAST DATE FOR SUBMISSION

**May 14, 2024 3:00 PM**

TENDER OPENING DATE AND TIME

May 14, 2024 4:00 PM

TENDER DOCUMENT FEE

FREE

EMD

₹26,000

ELIGIBILITY CRITERIA

REFER PAGE NO. 2 (TWO)

**Note:**

The contractor should submit valid electrical license of the specific state along with the application and the same should present at all meetings whenever required. Absence of the same leads to disqualify.

The tenders received after the due date and time specified or unsealed or incomplete or unsigned or by facsimile or email will be summarily rejected. The bank reserves the right to accept / reject the bids without assigning any reasons whatsoever.

**Eligibility Criteria:**

The tenders received after the due date and time specified or unsealed or incomplete or unsigned or by facsimile or email will be summarily rejected. The bank reserves the right to accept / reject the bids without assigning any reasons whatsoever."

Tenderer must quote in whole numbers only. Decimals, fractions are not allowed and may lead to disqualify.

**The tenderer has to do all works at their workshop and transported to site. Tenderer should take care of minimal disturbance to the bank working environment.**

The tenderer should have done similar works in the PSU's and Govt. and experience of having successfully completed similar jobs i.e last **seven** years(as on tender date) should be either of the following:

**Qualifying Projects:**

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One similar completed work each costing not less than	80%	₹21,00,000
Two similar completed works each costing not less than	50%	₹13,00,000
Three similar completed works each costing not less than	40%	₹10,50,000
Average annual turnover of the last three years should not be less than		₹9,10,000

" Similar work(in single completed project) shall means: Execution of interior works like false ceiling, paneling works, partitions works, electrical works, fixtures and AC works etc.

**Work order and corresponding completion certificate should contain above words. **

Tender has to be submit in two parts PART: '1' and PART:'2'. PART:1 is Technical bid PART:2 is Financial bid, separately super scribed, sealed and both contained in another sealed envelope, super scribed with the name & address. The tenders should be submitted to the address - REFER PAGE NO. 1 (ONE)

The work is inclusive of all taxes but excluding GST.

Conditional tenders will be rejected.

The DD's shall be dated between the opening & closing dates & the amount should match as mentioned in the tender schedule.

**Registered office of minimum 2 (two) years old should be functional from the state where the project is located. GST certificate/Certificate of Shop and establishment act may be produced as proof. Bank may disqualify if any of the above requirement is not furnished in proper format.**

Name of the firm/company	:	
Postal address with pin code	:	
Email Address	:	
Telephone no. office 1	:	
Telephone No. office 2	:	
Fax no.	:	
Mobile number	:	
Contact person	:	
Year of establishment	:	
Status of the firm	:	Proprietorship/ Partnership/ Pvt.Ltd/ Ltd company
Registration No	:	
Name of Proprietor/ Partners/ Directors	:	
PAN NO	:	
CST NO.	:	
GST NO.	:	
Name of Bankers	:	
Copy of Balance Sheet for last three years	:	Enclosed/Not enclosed
Date and amount of Current Solvency Certificate	:	
Issued by: Bank's name Amount	:	

EMD amount DD NO. And date and bank's name	:	
Tender fee	:	
DD No. And date and bank's name	:	
<b><u>Qualifying criteria</u></b> <u>Works done in last Seven years</u> (Qualifying projects)	:	No. of works                      Amount in lacs
<b><u>Annual turnover</u></b>  <b><u>2021-22</u></b> <b><u>2022-23</u></b> <b><u>2023-24</u></b>	:	
Name and address of contact person for verification of work done in the past with telephone number	:	
List of Technical and other staff working for the organization	:	
Details of Supervisor and mobile no. Qualification and Experience certificate.	:	

## DETAILS OF THE CONTRACTOR

SIGNATURE OF AUTHORISED PERSON

NAME

DATE

## IMPORTANT INSTRUCTIONS TO THE TENDERERS

1. Please read all pages of the tender carefully.
2. The documents supplied to you comprises of Notice inviting Tender, Conditions of Tender, Form of Tender, Draft Articles of Agreement, General conditions of the contract, Technical Specifications, Bill of Quantities and Drawings etc.
3. Please sign in full on all pages of this document including drawings/layout etc.
4. Please submit the complete set duly filled in with signature, EMD drawings etc in two separate covers keeping Tender schedule & drawings in one cover and EMD along with your conditions, deviations, etc in another cover, both sealed separately.
5. You must quote the rates both in words and in figures.

## NOTICE INVITING TENDERS

Dear Sir,

Name of the work: Interior, Electrical& Air Conditioning Works to be carried out at Bank of Baroda

1. Sealed tenders are hereby invited on behalf of our client M/s Bank of Baroda, Regional Office, Refer Page no. 1 (One) for the subject work.
2. The tender documents consisting of Bill of quantities with preambles, Form of Tender, Conditions of the tender, Articles of agreement, Technical specifications, Layout & Drawings etc. can be downloaded from BANK OF BARODA web site [www.bankofbaroda.com](http://www.bankofbaroda.com)
3. Refer Page no. 1 (one) for last date and time of submission and address to submit tender documents.
4. Sealed tenders duly filled in should be addressed to : REFER PAGE NO: 1 (ONE)
5. Super scribing the name of the work on top of the sealed envelope as per Refer Page no. 1 (One).
6. The tender will be opened in the office of the Bank of Baroda Refer Page no. 1 (One) at 4.00 PM on 14.05.2024 day in the presence of the tenderers who may wish to be present.
7. Every tender document shall be accompanied by EMD in the form of a Bankers 'Cheque or Demand Draft drawn in favor of respective branches of Bank of Baroda, payable at As per page No. 1 (one). Tender documents not accompanied by such EMD are liable to be rejected straight away. EMD shall not bear any interest.
8. Time is the essence of contract. The work should be completed in Fifteen days from the date of issue of work order.
9. The earnest money shall be retained with the bank in case of successful tenderer, as part of the Security Deposit for the fulfillment of the contract.
10. The tenderer must carefully read and examine the whole tender document, layout and schematic drawings, study the technical specifications, drawings, etc before submitting the tender.

11. No consideration shall be given to a tender received after the expiry of time as stipulated above and no extension of time will normally be allowed for submission of tender.
12. The Notice Inviting Tenders, the conditions of tender and duly completed form of tender, Specifications etc, will form part of the contract Agreement to be executed by the successful tenderer with the Bank.

### CONDITIONS OF TENDER

1. The tender form must be filled in English and all entries must be made by hand and written in ink.
2. An authorized person must sign each and every page of the tender document.
3. The tender must be submitted in the prescribed format only. The tenderers must quote the rates in the schedule of quantities, rate and amount. The rates should be written both in words and figures without any erasures and alterations. However if errors are made, the wrong figures or words must be neatly scored out under full signature of the tenderers and the correct figured and words neatly rewritten. Over writing is not permitted.
4. Errors in the schedule of quantities rates and amount shall be dealt with in the following manner:
  - a) In the event of a discrepancy between the rates quoted in words and the rates in figures, lower rate will be taken into consideration.
  - b) In the event of an error occurring in the amount column as a result of wrong multiplication and extension of unit rate and quantities, the unit rate shall be regarded as firm and the amount shall be amended accordingly.
  - c) All errors in totaling in the amount column and in carrying forward, the totals shall be corrected.
5. The quantities indicated in the schedule of quantities are only probable quantities and are liable to alteration by omission, reduction or addition payment shall be made on the basis of actual quantities of work done at the accepted rates.
6. No alterations which are made by the tenderer in the drawings, specifications or in probable quantities accompanying the tender will be recognized and if any such alterations are made the tender is likely to be rejected and invalidated. Remarks and explanations should be given in a separate cover along with EMD and will become binding only if accepted in writing by the bank at the time of acceptance of the tender.
7. The tenderer must obtain for himself on his responsibility and at his own expenses all the information necessary for the purpose of filling this tender and to enter into a contract with the bank, he must examine the drawings, specifications, conditions etc, and must inspect the site of work and must acquaint himself with all local conditions and matters pertaining there to.
8. The tenderer shall also bear all expenses in connection with the preparation and submission of this tender.
9. EMD (E.M.D):

The tenderer shall also deposit an EMD amount in the form of a Bankers 'Cheque or Demand Draft drawn in favor of respective branches of Bank of Baroda, payable at As per page No. 1 (one) at the time of submission of the tender as Earnest Money, Bank is not liable to pay any interest on Earnest Money.

The EMD of unsuccessful tenderers shall be refunded to them without any interest after the decision to award the work is taken, The EMD of the successful tenderers shall be retained as part of security deposit and for the due fulfillment of the contract.

10. SECURITY DEPOSIT (S.D) :

Apart from EMD made as above, Security Deposit shall be deducted from running/progressive bills of the contractor @ 10% of the gross value of the each bill until the total security deposit including EMD equals to 10% of the accepted value of the tender. Security Deposit shall not bear any interest.

11. COMPLETION PERIOD:

The time is the essence of contract. The contractor shall complete the entire work within 15 (fifteen) days from the date of issue of the work order. The work shall be commenced immediately at the site. The work is of urgent nature and the contractor should strictly adhere to the completion time schedule.

12. The tenders submitted shall remain valid for acceptance for a period of 120 days from the date of their opening. Should any tenderer withdraw his tender before the expiry of the said period or makes any modifications to his tender, the tender shall be treated as having as having been rejected or abandoned and his EMD will be forfeited.
13. The Bank does not bind itself to accept the lowest tender and reserves to itself to reject any or all the tenders received without assigning of reasons thereof. Further, the Bank reserves the right to award any portion of the work or portions of the work to different tenderers or to award the entire work to one tenderer.
14. The tenderer whose tender is accepted is bound to execute agreement with the Bank in accordance with the draft agreement which will include the notice inviting tender, tender conditions, other papers herein, special conditions, drawings and specifications etc, but his liability, under the acceptance of his tender whether the formal agreement is drawn or not. The contractor shall bear all expenses in connection with the execution of the said agreement including fees for stamps and registration of documents as required.
15. The compensation or other sums of money payable by the contractor to the Bank under the terms of contract may be deducted from his EMD/SD if the amount so permits and the contractor shall unless such deposit has become otherwise payable, within ten days after such deduction make good in cash the amount so deducted.
16. The contractor shall carry out the work under the directions and supervision of the consultant and subject to the approval of the Bank in all respects.
17. On acceptance of the tender the contractor shall in writing at once inform the bank and the Consultants the names of his accredited representatives who will be responsible to take instructions from the Consultants/Bank.
18. The work or any part of it shall not be transferred assigned or sublet without the consent of the Bank.
19. The contractor shall be required to co-operate and work in accordance with and afford reasonable facilities for such other agencies/specialists as may be employed by the consultants/Banks on other works/sub works in connection with the work.
20. The contractor will be required to insure the work and keep it insured until one month after the date of taking over the works by the Bank or otherwise as per the terms of the contract, against loss or damage by fire and other usual risks other than the risks accepted in the terms of the contract with an approved insurance company.
21. The contractor is required to comply with all acts of Govt. relating to labour rules and regulations made there under from time to time submit at the proper times all particulars and statements required to be furnished to the labour authorities.
22. In carrying out the work, the contractor shall comply with the provisions of the safety code, annexed to these papers.

## FORM OF TENDER FOR WORKS

Dear Sir,

Having duly examined the tender documents including the drawings, specifications, designs, schedule of quantities relating to the works specified in the underwritten memorandum and having visited the site of the said work and having acquired all the requisite information relating there to as affecting this tender. I/We hereby offer to execute the works specified in the underwritten memorandum within time specified there in at the rates specified in the schedule of quantities and in accordance, in all respects with the specifications, designs, drawings and instructions in writing referred to in the conditions of the tender, the articles of agreement, special conditions, the schedule of quantities, and conditions of the contract and with such conditions of the contract and with such materials as are specified, by and in all other respects in accordance with such conditions in the schedule of quantities and conditions of contract so far as applicable.

Should this tender be accepted, in whole or in part, I/We hereby agree (i) to abide by and fulfill all the terms and provisions of the said conditions of the contract annexed hereto and the conditions of tender so far as applicable or in default thereof to forfeit and pay to Bank of Baroda, Regional Office, As per page No. 1 (one). The sums of money mentioned in the said conditions.

EMD as per page no. 1 is forwarded in form of Banker's cheque / Demand Draft drawn in favor of Bank of Baroda, As per page No. 1 (one).

I/We agree (i) that should I/We fail to commence the work specified in the above mentioned memorandum the bank shall without prejudice to any other right or remedy be the liberty to forfeit the Earnest Money, otherwise shall be retained by bank towards security deposit mentioned in the above memorandum. (ii) To execute all the works referred to in the tender document upon the terms and conditions contained or referred to therein and to carry out authorized variations as directed by the Consultants/Banks and as per said conditions of the contract.

Our Bankers are:

- 1.
- 2.

The names of the Proprietor / Partners / Directors of our firm are:

- 1.
- 2.
- 3.

Signature of tenderer with seal

Dated the .....day of .....2024.



### ARTICLES OF AGREEMENT

Articles of agreement made this the .....day of .....2024. between ..... Bank of Baroda .....having its Regional Office at As per page No. 1 (one) (Herein after called the Employer) of one part. AND

M/s.....having its registered office at..... (Here in after called the contractor) of the other part Where as the employer is desirous of getting the ...

Done as per schedule – 1 to this agreement and has annexed drawings, bill of quantities and specifications describing the work to be done are to be prepared by M/s. DESIGN DISCOVERY, Architects & Interior Designers,#26, AOC, Wellington Road, Secunderabad. Pin: 500026 (here in after called “THE CONSULTANTS”) and whereas the said drawings as per schedule – 2 inclusive. The bills of quantities marked .....and the specifications etc. have been signed by or on behalf of the parties hereto; and where as the contractor has agreed to execute upon and subject to the conditions set forth in schedule-3 here to attached (herein after referred to as the conditions), the work shown upon said drawings and described in the said specifications and included in the said bill of quantities for the sum of Rupees.....

#### NOW IT IS HEREBY AGREED AS FOLLOWS:

1. It consideration of sum of Rs ...  
To be paid at the time & in the manner set forth in the said conditions, the contractor will upon and subject to the said conditions execute & complete the works shown upon the said drawings & described in the said specifications & bill of quantities.
2. The Employer will pay to the contractor the said sum of Rs.....or such other sum as shall become payable hereunder at the times and in the manner specified in the said conditions.
3. The terms The Consultants in the said conditions shall mean M/s. DESIGN DISCOVERY, Architects & Interior Designers, or in the event of their ceasing to be the Consultants for the purposes of this contract. Such other persons as shall be nominated for that purpose by the said conditions. Provided always that no person subsequently appointed to be the consultants for the time being.
4. The said conditions, specifications and priced bill of quantities shall be read and construed as forming part of this agreement, and the parties hereto will respectively abide by and submit themselves to the conditions and stipulations and perform the agreement on their parts respectively in such conditions, specifications and priced bill of quantities contained.

As witness our hand the day and year first above written signed by said EMPLOYER.

#### SIGNATURE OF EMPLOYER

In the presence of witness:

Name	:	Name	:
Occupation	:	Occupation	:
Address	:	Address	:

As witness our hand the day and year first above written signed by the said Contractor(s):

#### SIGNATURE OF CONTRACTOR

In the presence of witness:

Name	:	Name	:
Occupation	:	Occupation	:
Address	:	Address	:

## CONDITIONS OF CONTRACT

1. Interpretation of Clauses:
  - i) In construing these conditions, the specifications, schedule of quantities and Tender and agreement, the following words shall have the meanings here in assigned to them except where the subject or context other requires.
  - ii) Headings and marginal notes to the conditions of contract shall not be deemed to form part thereof or be taken in to consideration in the interpretation or construction there of or of the contract.
  - iii) Where the context so requires (i) works importing persons include firms and corporations and (ii) works importing the singular only also include the plural and vice versa.
    - a) Employer shall mean BANK OF BARODA, REGIONAL OFFICE, As per page No. 1 (one). Consultant: Shall mean DESIGN DISCOVERY or in the event of their ceasing to be consultant for the purposes of this contract such other person or persons as shall be nominated for that purpose by the Employer subject to such qualifying provisions as may be agreed upon.
    - b) Contractor shall mean -----and include his/their legal representatives, permitted assigns, or successors.
    - c) Site: The site shall mean the site where the works are to be executed as shown with in boundary in red border on the site plan including any building and erections thereon allotted by the Employer for the Contractor's use.
    - d) The " Contract" of this contract: Shall mean the tender documents comprising the notice inviting tender, form of tender conditions, the drawings and priced bill of quantities with their preamble, the acceptance thereof, and the articles of agreement, together with the conditions of contract with its appendix and special conditions, if any the specifications referred to in the conditions, designs, drawings and instructions issued from time to time by the Consultants/Bank and all these documents taken together are deemed to form one contract and shall be complementary to one another.
    - e) Bills of Quantities: Variously also termed priced bill of quantities, schedule of rates, shall mean the schedule of quantities originally furnished with the notice inviting tender, duly priced in by the tenderer and accepted by the Employer for inclusion as a part of the contract for determining the consideration payable to the contractor for executing the work and as part of the contract agreement it is also referred to as the contract scheduled.
    - f) 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 to the 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.
    - g) Act of Insolvency: Shall mean any act of Insolvency as defined by the presidency towns Insolvency Act. Or the provincial Insolvency Act or any is amending such original.
    - h) 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 percentage 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 a tender as the price of that item a similar percentage or proportion of the sum so added or deducted by the contractor, the total amount of any price cost items and provisional sums of money shall be deducted from the total amount or the tender. The expression "net prices" when used with reference to the contract or accounts shall be held to mean rates or prices so arrived at.
    - i) The works (or the work) shall unless there by something either in the subject or context repugnant to such construction, be considered and taken to mean the works by or by virtue of the contract contracted to be executed whether temporary or permanent, and whether original, altered, substituted or addition. Wherever the word "works" is used it shall cover "installation" also under the same definition.

- j) Executed Risks are risks due to riots (otherwise than among contractors Employees) and civil commotion (in so far as both these are uninsurable war (whether declared or not) invasion, act of foreign enemies, civil war, rebellion, revolution, insurrection, military or usurped power, any acts of Government, damage from air craft, acts of God such as earthquake, lightning and unprecedented floods and other causes over which the contractor has no control and accepted as such by the Employer or causes solely due to use of occupation in manner for which the works/installations in respect of which a certificate of completion has been issued or a cause solely due to faculty design of works.
- k) Provisional Items Shall mean items for which only very approximate quantities have been included in the tender documents.
- l) Virtual Completion of works/installations shall mean the Substantial completion of works/installations in accordance with the contract is enabling the employer to the same.
2. Consultant/Bank Instructions: The Contractor shall execute the whole and every part of the work in the most substantial and workmanship like manner and both as regards materials and otherwise in every respect in strict accordance with the specifications, conforming exactly, fully and faithfully, to the designs, drawings, drawings and instructions in respect of the work given by the Consultants/Bank and under the directions of and under the supervision of and subject to the approved in all respects by the Consultant/Bank who may in their discretion and from time to time issue further drawings, and/or written instructions, directions and / or written instructions, details and explanations which are hereafter collectively referred to as Consultant/Bank in regard to:
- Variation or modification of the design quality or quantity of Works of the addition or omission or substitution of any work.
  - Any discrepancy in the drawings or between the schedule of quantities and/or Drawings and/or specifications.
  - The removal from the site of any materials brought thereon by the contractor and the substitution of any other materials therefore.
  - The dismissal from the works of any persons employed there upon.
  - The opening up for inspection of any work covered up.
  - The amending and making good of any defects under clause 19.
  - The removal and/or re-execution of any works executed by the contractors, on account of defects under clause 18.
- The contractor shall forthwith comply with and duly execute any work comprised in such Consultants/Bank instructions provided always that 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 by and if not dissented from writing with in a further seven days by the Consultants/Bank; such shall be deemed to the Consultant/Bank instruction within the scope of the contract.
- Manner of Execution of Work: The Consultant/Bank shall be entitled to, direct at what point or points and in what manner the works are to be commenced, and from time carried on.
- Variation to be approved by Employer: Notwithstanding anything herein contained, the Consultant/Bank or his representative shall not, without prior concurrence in writing which will result in the Employer having to pay the contractor any additional sum greater than Rs (tendered amount accepted by the Bank) And all such instructions issued to the employer. The contractor shall submit through the Consultant/Bank a statement of analysis of rates, vouchers etc. the rates on scrutiny and final acceptance of the employer under the terms and clauses 16 hereof shall form a supplementary schedule of quantities.
3. Agreement copies to be supplied: The contract Document shall remain in the custody of the Consultant/Bank (Employer) and shall be produced by him at his office as and when required by the Employer/ Consultant/Bank or the contractor. The Consultants/Bank shall furnish the contractor on the signing hereof or his representatives shall at all reasonable times have access to the same. Before the issue of the final certificate to the contractor he shall, if so required, forth with return to the Consultant/Bank all drawings and specifications.

4. The Contractor to provide everything necessary: The contractor shall be deemed to have satisfied himself before tendering as to the correctness and sufficiency of his tender for the works and of the rates and amounts shall except as otherwise provided cover all his obligations under the contract, and all matters and things necessary for the proper completion of works.

The contractor shall provide at his own cost all materials (except such, materials if any as may in accordance with the contract be

supplied by the Employer) machinery, plant, tools appliances, implements, ladders cordage, tackle, scaffolding, in fact everything necessary or proper for the proper execution of the work, whether original, altered or substituted according to the true intent and meaning of the or substituted taken together whether the same may or may not be reasonably inferred there from, and if the contractor finds and discrepancy in the drawings, or between the drawings, schedule of quantities and specifications, he shall immediately and in writing refer to the Consultant/Bank who shall decide which is to be followed, subject to:

- i) Anything shown or contained in any one or other of (a) the drawings, (b) specifications and (c) the contract schedule and not shown in the others shall be equally binding as if it were contained in each of them.
  - ii) Figured dimensions are to be followed in preference to the scale, and large scale details in preference to small-scale drawings.
  - iii) The following orders of preference shall apply:
    - a) The drawings, (b) specifications, covered by bill of quantities, (c) Technical specifications.
- 5 Contractor to conform to legal regulations: The contractor shall Conform to the provisions any Act of the Legislature relating to the works and to the regulations and Bye-Laws of any authority and if any water, lighting and other companies and/or authorities with whose system the structure is proposed to be constructed, and shall before making any variations from the drawings or specifications that may be necessitated by so conforming give to the Consultant/Bank written notice, specifying the variation proposed to be made and the reason for it, and apply for instructions thereon. In case the contractor shall no within ten days receive such instructions he shall proceed with the work, confirming to the provisions, Regulations or byelaws in question and any variations so necessitated shall be dealt with under clause 12 & 16.

The contractor shall indemnify the Employer from and against all claims, demands, proceedings damages, or to which it may put by reason not confirming to or complying with any of the provisions of requirements of any act or sanction, central or state, rules, regulations, Bye-Laws of local authorities, Panchayat, collector or any other companies relating to or in water, light or other amenities at the site.

6. Contractor Responsible for setting out work: The contractor shall on the basis of dimensioned drawings and information necessary for the purpose furnished by the Consultants/Bank set out the works on site at his own expense responsible for the correctness of the positions, levels, dimension and setting out by the representative of the consultant or of the Employer shall not in any way he shall amend at his own cost and to the satisfaction of the Consultant/Bank, any error in the setting out or consequential to wrong setting out, found at any stage during the progress of the work or during the defects liability period after completion of the work.
7. 1 The contractor shall maintain at the site comprehensive registers, posted up-to-date, showing the nature of the materials/articles/goods their identification marks, dates and the results of the tests, etc. such registers shall be got countersigned by the representatives of the Consultant/Employer at site and extracts from the consultant and the Employer. The form of the registers shall be mutually set.
7. 2 The costs of the sets and of the materials and labour and equipment if any, involved in the testing operation shall be borne by the Contractor in all cases except as otherwise provided for in the contract.
8. Supervision by Contractor: The contractor shall give all necessary personal superintendence during execution of works, and thereafter as long as the Consultants / Bank may consider necessary until the expiration of the "Defects Liability Period" satisfied in clause 19 herein. The contractor shall also during the whole time the works are in progress, employ a competent and qualified representative whose name the Consultant/ Bank shall approve and who shall be in attendance at the works while the men are at work. Any directions, explanations, instructions, or notices given by the Consultant/Employer to such representatives shall be held to have been given to the contractor. If the

contractor fails to appoint and keep on the works a competent and qualified representative as aforesaid the Consultant/Bank shall have powers to suspend the works till such time a competent qualified representative as aforesaid is posted and the contractor shall not be entitled to claim extension of time on the plea of such suspension of the work.

9. Dismissal of workmen: the contractor shall on the request of the Consultant/Employer immediately dismiss from the works any person employed thereon by him who may, in the opinion of such person shall not be again employed on the works without the permission of Consultant/Employer.
10. Access to works: The Employer, the consultant and his respective representatives shall at all reasonable times have free access to the works and / or to the workshops, factories or other places where materials are laying or from which they are being obtained and his respective representative, all reasonable facilities necessary for inspection and examination and tests of the materials and workmanship. No person unauthorized by the Employer or the consultant except the representatives of public authorities shall be allowed on the works at any time.
11. Work not to be sublet: The whole of the works included in the contract shall be executed by the Contractor who shall not directly or indirectly transfer, assign or sublet the contract or any part share thereof or interest therein without the written consent of the Employer, and no undertaking shall relieve the contractor from active superintendence of the works during their progress.
- 12.1 Variation not to vitiate the contract: No alteration, omission or variation shall vitiate this contract but incase if the Consultant/Bank thinks proper at any time during the progress of the works to make any alterations in or additions to or omission from or substitutions for the original drawings, specifications, designs and instructions or any alterations in the kind or quality of the materials to be used in the work and shall give notice thereof to the contractor, in writing the contractor shall alter, add to or omit from or substitute for as the case may require, in accordance with such notice and carry out the amended work on the same conditions in all respects on which he agreed to the main work, but the contractor shall not do any work extra to or make any alterations or additions to or omissions from or substitutions in the works or any deviation from any of the provisions of the contract stipulations, specifications or contract drawings without the previous consent in writing of the Consultant/Bank and the value of such extra, alteration, additions or omissions or substitutions shall in all cases be determined by the Consultant/Bank with the prior approval in writing of the Employer in accordance with the provisions of Clause 16 hereof, and shall be added to or deducted from the contract amount accordingly.
- 12.2 The supply and execution of any part of the carrying out of any works incidental to the execution of any item or class of work shown in the schedule of quantities shall not constitute a variation entitling the contractor to extra paying providing that the said item or class of work cannot be executed satisfactorily according to the true intent and meaning of the drawings and specifications without the said part thereof or the said work incidental thereto whether the same may or may not be particularly shown or described in the drawings, Specifications and schedule of quantities and provided the same may be reasonably inferred thereof.
  - 12.2.1 The time for completion of work shall, in the event including authorized variations results in an addition to the contract sum in excess of 10% be extended on payment by the contractor as follows: In the proportion which the total executed contract value including authorized Variations bear to the original contract value, the certificate of the consultant/Bank Being conclusive as to such proportion: 25% of the additional time calculated way of above or such further time as may be considered to be reasonable by the consultant/Bank.
  - 12.3 Similarly, the changing the position of the work from one to another or to a more difficult position than shown in the drawings or described in the specifications or the contract schedule, of the carrying out of work under circumstances not contemplated in the specification or the contractor to extra payment.
  - 12.a No compensation for alteration in or restriction of work: If at any time after the commencement of the work the Employer for any reason whatsoever does not require the whole or part or parts thereof as specified in the tender to be carried out, the Consultant/Bank shall give notice in writing of the fact to the contractor who shall not claim for any compensation whatsoever on account of any profit which he did not derive in consequence of the full amount of the work not having been carried out. Nor shall have any claim for compensation by reason of any alterations having been made in the original

specifications, drawing, designs and instructions that shall involve curtailment of the work originally contemplated.

13. b Schedule of quantities on standard of measurement: The schedule of quantities unless otherwise stated shall be deemed to have been prepared in accordance with the Indian Standard Method of Measurement.
14. Errors in Bill of Quantities: No errors in description or in quantity or by way of omission of items from the schedule of quantities shall vitiate this contract but shall be rectified and the value thereof as ascertained under clause 16 herein shall be added to or deducted (as the case may be) from the contract amount provided that there shall be no rectification of errors in the contractor's schedule of rates.
15. Measurement of works: The Consultant/Bank may from time to time intimate to the contractor and the Employer that he required the works to be measured, the contractor shall fore with attend or send a qualified agent to assist the Consultant/Bank or the representative in taking such measurements and calculations and to furnish all particulars or to give all assistance required either of them. Provided that the contractor shall give notice of not less than ten clear days to the Consultant/Bank or his representative in charge of the work before covering up or placing beyond the reach of measurement any work in order that the same may be measured and correct dimensions thereof be taken before the same is covered or placed beyond reach of measurement any work without the consent of the Consultant/Bank and his representative in ten days inspect the work and cause the measurements to be made if , any work be so covered up without the consent of the Consultant/Bank or his representative-in-charge of the work, the same shall be uncovered at the contractor expense, or in default thereof no payment or allowance shall made for such work or materials with which the same was executed. Should the contractor not attend or neglect or omit to send such agent than the measurements taken by the Consultant/Bank or person approved by him shall be taken to be correct measurement of the works. Such measurements shall be taken in accordance with the Indian Standard Method of Measurement, unless otherwise provided for elsewhere in this contract. The contractor or his agent may at the time of measurement taken such notes and details as he may require. All authorized extra works, omission and all variations made without Consultant/Bank knowledge, if subsequently sanctioned by him in writing (with the prior approval in writing of the Employer) shall be included in such measurement.
16. Price of variation: The rates for additional, altered, substituted work shall be arrived at in accordance with the following rules:
- i) The net rates or prices in the contract schedule shall determine the valuation of (the rates for) the extra work (items) where such extra work is of similar character and is executed under similar conditions as the work priced therein.
  - ii) If the rates for the extra, altered or substituted (deviated) work are not provided for (available) in the contract schedule, they shall to the extent possible be derived out of the rates given in that schedule for similar items. For the purpose of such derivation, where necessary and when so directed, the contractor shall furnish detailed analysis for the said similar or near similar items in the contract schedule. For such portions of the analysis for the extra altered or substituted (deviated) work for which prices cannot be abstracted from the corresponding analyzing of rates for the said similar or near substantiated by purpose bills/vouchers shall be adopted. Using factors and constants for quantum of materials labour T & P and sundries from NBO/CPWD, standard PWD data/analysis in the order. When called upon to do so the contractor shall submit the required purchase bills/vouchers.
  - iii) In respect of a contract which incorporates more than one schedule the rate applicable in case (i) above if not provided for in the schedule pertaining to the work in which the addition, alteration or substitution (deviation) occurs, shall be taken as the lowest applicable rate in the other schedule similarly, in case (ii) above, if similar or near similar items cannot be found in the schedule pertaining to the work which the addition, alteration or substitution (deviation) occur, similar or near similar items from the other schedules shall be adopted.
  - iv) In the case of additional, altered or submitted (deviate) work for which rates cannot reasonably be derived as at (ii) and (iii) above, the rates shall be worked out adopting market prices substantiated by purchase bills/vouchers, using factors constants for quantum's of material, labour, T&P and sundries from NBO/CPWD/Standard materials, labour T& P and sundries from NBO/CPWD/Standard PWD/data analysis in the order thus written, adding maximum of 15%

towards profits and overheads. When called upon to do so the contractor shall submit his purchase bills/vouchers, to the Consultant/Bank.

- v) The question as to what particular items, being similar or near similar to the additional, altered or substituted (deviated) work in the contract schedule are to be adopted for deviation of rates for the additions, altered or substituted (deviated) work and whether the said rates cannot be derived from similar or near to similar items in the contract schedule will be decided by the Consultant/Bank.
- vi) In case (ii) to (iv) the contractor is required to submit his analysis of rates adopting the principles enunciated and the Consultant/Bank after scrutinizing the analysis and other paper furnished, will allow such rates as he considers reasonable.
- vii) Where extra work is of such a nature that it cannot be properly measured or valued the contractor shall be allowed day work prices at the net rates stated in the tender or the period schedule of quantities or, if not stated, then in accordance with the minimum local day work rates and wages for the district, notified by the concerned authority. Provided that in either case if required by the Consultant/Bank vouchers, muster rolls and other documents required for proper verification of the labour employed and the materials developed on the said work and the costs thereof be delivered to the Consultant/Bank or his representatives at or before the end of the week following that in which the work has been executed.

The Consultant/Bank will decide the question as to whether extra work is of such nature that it cannot be properly measured or valued. The margin to be allowed on actual costs to the contractor towards profits and overheads shall be 15%.

- viii) Deviation Limit: It is the value of which the total executed contract value including authorized variation in excess of the original contract value. Expressed as a percentage and shall be adjusted on the sum total of all additions, omissions, reductions, alterations or substitutions (deviations) covered by authorized variations under clause 2 and 13 of the conditions of contract. The values of prime cost sums shall not be included in calculating the above percentage.
17. Unfixed Materials: Wherein any certificate (of which the contractor has received payment) the Consultant/Bank has included the value of any unfixed materials intended for and/or placed on or adjacent to the works such materials shall become the property of the Employer and shall not be removed except for use upon the works, without the written authority of the Consultant/Bank. The contractor shall be liable for any loss or damage to such materials.
18. Removal of Improper work, material etc., : The Consultant/Bank shall, during the progress of the work, have full powers to order in writing from time to time, removal from the works within such reasonable time in the opinion specified in the order, of any materials which in the opinion of the Consultant/Bank are not in accordance with the specifications or the instructions of the Consultant/Bank or do not conform to approved samples, the substitution of the rejected materials by proper other materials, and the removal and proper re-execution of any work executed with unsound, imperfect or skilled workmanship or with materials not in accordance with the contract, notwithstanding that the same may have been passed or certified or, and paid for 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 out such order, the Employer shall have the power to be answerable or accountable for any loss or damage that may happen or arise to such materials removed and all expenses consequent on or incidental thereto as certified by the Consultant/Bank shall be borne by the contractor, or may be deducted by the Employer from money due or that may become due to the Contractor.

In lieu of re-execution of any work not in accordance with the contract Consultant/Bank may in their option allow it to remain but will allow for such work reduced rates. The decision of Consultant/Bank to exercise his option in this regard and the quantum of reduction to be made in the rate for the item in question shall be final and binding on the contractor.

19. Defects Liability Period: Any defect, shrinkage, settlement or other faults which may appear within the Defects Liability Period stated in the appendix hereto or if none so stated, within 12 months after the virtual completion of the works arising in the option of the Consultant/Bank from material or workmanship not in accordance with the contract, shall on demand which shall be made within the defects liability period, in writing by the Consultant/Bank and within such reasonable time as shall be stated therein specifying the work, materials or articles complained of notwithstanding that the same

may have been passed or/and certified, paid for, be amended and made good by the contractor, at his own proper charges and cost and incase if default. The Employer may employ and pay other person or persons to amend and make good such defects, shrinkage, settlements or other faults and all damages, loss and expenses consequent thereon or incidental thereto shall be made good and borne by the contractor and such damages loss and expenses shall upon the Consultant/Bank certificate in writing be recoverable from the contractor by the Employer or may be deducted by the Employer from any money due or that may become due to the contractor or the Employer may in lieu of such amending and making and by the contractor deduct from any money due to or that may become due to the contractor a sum to be determined by the Consultant/Bank equivalent to the cost of amending and making good such work and in the event of the amount retained under clause 28 being insufficient, recover the balance from the contractor, together with any expenses the Employer may have incurred in connection therewith, should any defective work have been done or material supplied by any sub-contractor employed on the works who has been nominated or approved by the Consultant/Bank/Employer as provided in clause 11 the contractor shall be liable to make good in the same manner as if such work or material had been done or supplied by the contractor himself and been subject to the provisions of clause 2 thereof. The contractor shall remain liable under the provisions of this clause notwithstanding the signing by the Consultant/Bank of any certificate including the final certificate, or the passing of any certificate including the final certificate, or the passing of any accounts.

20. Completion Certificate: The works shall not be considered as completed until the Consultant/Bank has certifies in writing that they have been virtually completed and the defects liability period shall commence from such certified date of virtual completion of work. Within ten days of the completion of work, the contractor shall give notice of such completion of the Consultant/Bank shall inspect the work and if there is no defect in the work shall furnish the contractor with certificate of completion otherwise a provisional certificate of completion indication defects (a) it be rectified by the contractor and / or (b) for which payment will be made at reduce rates, shall be issued but no certificate of shall the work considered to be complete until the work as executed, all scaffolding, surplus materials, walls floors or other parts of any building, in upon or about which the work was executed, or of which he may have had possession for the purpose of execution thereof , and not until the shall have been measured by the Consultant/Bank. If the contractor fail to comply with the requirements of this clause as to removal of scaffolding, surplus materials and rubbish as aforesaid and cleaning off dirt on or before the date fixed for the completion of the work, original or extended in terms of clause 24 herein, the employer after issuing due to notice, may at the expenses of the contractor remove such scaffolding, surplus materials and rubbish; etc; and dispose of the same as he thinks fit and clean off such dirt as aforesaid, and the contractor shall have no claim in respect of any such scaffolding or surplus materials as aforesaid except for any sum actually realized by the sale thereof. And the expenses, if any, so incurred may be recovered from any money due or that may become due to the contractor by the Employer.
21. Contractor Liable for Damage Done:
- 21.1 The contractor shall be responsible for all injury to persons, Animals or things, and for all structural and decorative damage to the property which may arise from the operation or neglect of himself or if any nominated subcontractor's employee whether such injury of damage arise from care less, accident or any other cause whatever in any way connected with the carrying out of the contract. This clause shall be held to include, inter-alia, any damage to building, whether immediately adjacent or otherwise, and any damage to roads, streets, foot-paths, bridges or ways as all damage caused to the buildings and works forming the subject of this contractor by frost or other inclemency of weather. The Contractor shall indemnify the employer and hold him harmless in respect of all and any acts of Government or otherwise and also in respect of any awards of compensation or damages consequent upon such claims.
2. The contract shall reinstate all damages of every sort mentioned in this clause, soas to deliver up thewhole of the contract works complete and perfect in everyrespect and so as to make good or otherwise satisfy all claims for damage to theproperty of third party.
3. The Contractor shall indemnify the employer against all claims  
Which may be made against of employer by any member of the public or other 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



insurer a policy of insurance in the joint names of employer and contractor against such a risks and deposits such policy or policies with the employer from time to time during the currency of this contract. The contractor shall also similarly indemnify the employer against all claims which may be made upon the employer whether under the work men'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 sub-contractor and shall at his own expenses effect and maintain, until the virtual completion of the contract, with on approved insurer a policy of insurance in the joint names of the employer and the contractor against such risks and deposit such policy or policies with the employer from time to time during the currency of the contract.

The contractor shall be responsible for anything, which may be excluded from the insurance policies above referred to, and also for all other damages to any property arising out of and incidental to the negligent for defective carrying out of this contract. He shall also indemnify the employer in respect of any costs, charges and expenses arising out of claim or proceeding and also in respect of award of compensation for damage arising there from.

The Employer with the concurrence of the Consultant/Bank shall be at liberty and is hereby empowered to deduct the amount of any damage, compensation, costs, charges and expenses arising or occurring from or in respect of any such claims or damage from any or all sums due or to become due to the contractor.

22. Responsibility for safety of building: The contract shall be responsible for the safety of the works (including the materials, temporary building and plant) until they are taken over by the employer and they shall stand at their risk, and be in the sole charge of the contractor, who shall be responsible for and must with all possible speed make good all damage from whatever cause.
- 22.a Insurance of the works: The contractor shall within 7 days from the date of commencement of the work insure the works at his cost and keep them insured until one month after the works are taken over by the Employer or three months after the date of completion whichever in earlier against laws or damage by fire and unusual risks other than fire against which insures generally provide cover in a CONTRACTORS ALL RISK POLICY, with names of the employers and contractor (the name of former being placed first in the policy), for the full amount of the contract. Such policy shall cover the property of amount of the employer only and Consultant and surveyor's fees for assessing the claim and in connection with his services generally in re-instatement sub-contractor or employee. The contractor shall deposit the policy and receipts for the premium paid with the consultant within a week of the date of commencement of the work unless otherwise instructed by the consultant/Bank. In default of the consultant/Bank on his behalf may be due or that may become due to the contractor.

The contractor shall as soon as claim under the policy is settled, or the work reinstated by the insurers should they elect to do so, proceed with all due diligence with the completions of the works in the same manner as though the fire or other such risk had not occurred and in all respects under the same conditions of contract. The contractor in case of rebuilding or reinstatement after fire or other such usual risk shall be entitled to such extension of time for completion as the Consultant/Bank decides.

23. Liquidated Damages: If the contractor fails to complete the works by the date stated in the Appendix or within any extended time under clause 24 herein below the contractor shall pay or allow the employer the sum named in the appendix as "Liquidated Damages" for period during completion of the work as defined in the contract, and the employer may deduct such damages from any money due or that become due to the contractor.
24. Extension of Time: If the contractor shall desire of time for completion of the work on the grounds of his having been unavoidably hindered by such causes as (a) force major or (b) any exceptional inclement weather or (c) proceedings taken or threatened by or despite with adjoining or neighboring owners or public owners or public authorities arising otherwise than through the contractors or (d) the work or delays of other contractors or the consultant/bank and not referred to in the schedule of quantities and or specifications or (e) strike or lockout affecting any of the building trades or directly the work or (f) delays in the supply if materials stipulated to be supplied by the employer or any other valid ground, he shall apply in writing to the consultant/bank within 2 (two) days of the date of such hindrance an account of which he desires such extension as aforesaid and the consultant/bank, if in his opinion reasonable grounds have been shown thereof, may with the previous approval in writing of the employer make a fair and reasonable extension of time for completion of contract works,

but the contractor shall nevertheless the constantly use his endeavours to prevent delay and shall do all that may reasonable be required of him to proceed with the work expeditiously provided.

- a. That the contractor shall have no claim other than extension of time for the delay in completion of the work due to such hindrance and
  - b. That the contractor shall suspend the works whenever called upon to do so in writing by the consultant/bank and shall be allowed suspension of work and nothing else.
25. Failure of contractor to comply with consultant/bank Instruction: If the contractor, after receipt of written notice from the consultant/bank requiring compliance within a week fails to Comply with such further drawings/and/or consultant/bank instructions, the employer may employ and pay other persons to execute any such work whatsoever that may necessary to give effect thereto, and all costs incurred in connection therewith shall be recoverable from the contractor by the employer on the certificate of the consultant/bank as a debt or may be deducted by him from any money due or to become due to the contractor.
26. Termination of contract by Employer: If the contractor being an individual or a firm commits any "Act of Insolvency", or company shall have an order for compulsory insolvency or be subject to the supervision of the court and of official assignee or the liquidator in such acts of insolvency or winding up, as the case may be and shall be unable within 7 days after notice to him requiring him to do so, to show to the reasonable satisfaction of the consultant/bank that he is able to carry out and fulfill the contract and to give security therefore, if so required by the consultant/bank. OR if the contractor (whether an individual, firm of incorporated company) shall suffer execution to be issued. OR shall suffer any payment under this contract to be attached by or on behalf of any of the creditors of the contractor. O R shall assign or subject this contract without the consent in writing of the employer first obtained. OR shall charge or encumber this contract or any payments due or which may become due to the contractors there under; OR if the consultant/bank shall certify in writing to the employer that the contractor.

Has abandoned the contract, or 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 Has failed to commence the works, or Has without any lawful excuse under these conditions suspended the progress of the works for 14 days after receiving the consultant/bank notice to proceed, or Has failed to remove the materials from the site or to pull down and replace work for seven days after receiving from the consultant/bank written notice that the said Materials or work were condemned and rejected by the consultant/bank under these conditions, or Has neglected or failed persistently to observe and perform all or any of the acts, matters or things by this contract to be observed and performed by the contractor for seven days after written notice shall have been given to the contractor requiring the contractor to observe or perform the same, or Has to determine of good workmanship of without the consent if writing of the Employer sublet any part of the contract.

Then and in any of the said causes the employer may not withstanding any previous waiver, after giving seven day's notice in writing to the contractor, determine the contract, but without thereby affecting the powers of the consultant / 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 behalf of the contractor. And further the employer by his agents or servants may enter upon and take possessions of the works and all plant, tools, scaffolding, sheds, machinery, steam or other power utensils and materials laying upon the premises or the adjoining lands or roads, and use the same as his own property or may deploy the same by means of his own servants and workmen in carrying on and completing the works or by employing other contractor or persons to complete the work and the contractor shall not in any way interrupt do no act, matter, or thing to prevent or hinder such other contractor/s or other person or persons employed for completing and finishing or using the materials as soon thereafter as convenient the consultant/bank shall give receipt thereof by him the employer shall be entitled to sell the same by public auction and give credit to the contractor for the amount realized.

The contractor's account shall also be credited with the amount that would have been payable to him, for uncompleted work (completed by the Employer through other contractor/s or person as aforesaid) in terms of his agreement as if the contractor had not been determined and he (the contractor) had continued to execute the work to its completion. The actual gross expenses to the employer including

incidental charges in completing the uncompleted work Through other contractor/s or person or persons shall be debited to the contractor's accountant if it be not less than the credit for the uncompleted work as above referred if however, the said debit to be made less than the said credit

then the amount to be debited shall be less than the said credit, than the amount to be debited shall be equal to the value of the credit given as above referred.

The consultant/bank shall thereafter as certain and certify in writing what (if anything) in the final accounting is due to payable to the contractor for the sale of the surplus materials and plant and loss the employer shall have been put any owing, to the contractor and vice versa, and the certificate of the consultant/bank in this regard shall be final and conclusive between the parties.

27. Certificate and payment: All bills in triplicate shall be submitted by the contractor along with detailed measurements of the work completed at site provided that at least 50% of the work of the accepted value of the tender has been completed at site by the contractor. The consultant shall check/take the measurements or cause the measurements to be checked/taken for the purpose of having some to be verified and to the extend work has been executed in accordance with the contract, issue interim certificate and the employer shall make payment to the contractor on the basis of such certificates within the period specified for honoring interim certificates (in the appendix to the conditions of the contract) subject to retention of SD at the percentage marked in the said appendix till the whole SD is collected. During the tenure of this contract, only two bills shall be accepted. The first bill shall be as per interim certificate as above and the second bill shall be the final bill as detailed under.

And when the works have been virtually completed and the consultant/bank shall have certified in writing that they have been so completed, the contractor shall submit the final bill in respect of the contract work within on month thereafter and in accordance with the certificate to be issued by the consultant/bank payment shall be made by the employer with in the time named in the appendix as "Installment after virtual completion". 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 consultant/bank after the expiration of the period to as "the defects liability period" in the appendix hereto from the date of virtual completion or as soon after the expiry of such period as the works shall have been finally completed and all made good according to the true intent and meaning thereof whichever shall last happen. Provided always that the issue by the consultant/bank of any certificate during the progress relive the contractor from his liability in case of fraud, dishonestly, or fraudulent concealment relating to the works or material or to any matter dealt with in the certificate and in case of all defects and insufficiencies in the work or materials which is reasonable examination would not have disclosed. No certificate of the consultant/bank shall it self be conclusive evidence that any work or materials to which it relates are in accordance with the contract neither will be contractors have a claim for any amounts which the consultant/bank might subsequently be discovered as not payable and in this respect the employer's decision shall be final and binding.

The consultant/bank shall have power to with hold any certificate if the works or any parts thereof are not being carried out to his satisfaction.

The consultant/bank, may, in any certificate make any correction in any previous certificate, which shall have been issued by him. No certificate of payment will be issued by the consultant/bank if the contractor fails to insure the works and deep them insured till the issue of the virtual completion certificate of payment may be refused if the contractor fails to execute the formal agreement within two weeks of his being called upon to do so.

28. Security Deposit, Retention monies bear no interest: Return money/security deposit, or the balance of it available with the employer, shall be refunded to the contractor in the manner specified in the appendix to the conditions of contract and shall bear no interest whatsoever until the date of its return, not withstanding any provision to the contrary elsewhere in this contract.
29. Matters accepted from Arbitration: The decision, opinion, direction certificates (except for payment) with respect to all or any of the matters under clauses 2,4,7,9,12,16,18,19,24,26 hereof (which matters are herein referred to as the excepted matters) shall be final and conclusive and binding on the parties hereto and shall be without appeal. And other decision, opinion, direction, certificate or valuation of the consultant/bank or any refusal of at the consultant/bank to give any of the same shall be subject to the right of Arbitration and review in the same way in all respect (including the provisions as to opening the reference) as if it were a decision of the Consultant/Bank under the following clause.
30. Arbitration Clause:

All disputes or differences of any kind whatsoever which shall at any time arise between the parties hereto touching or concerning the works or the execution or maintenance thereof on this contract or the rights touching or concerning the works or the execution or maintenance operation or effect thereof or to the rights or liabilities of the parties or arising out of or in relation thereto whether during (other than those in respect of which the decision of any person is by the contract expressed to be final and binding) shall after written notice by either party to the contract or after determination, for closure or breach of the contract to the contract either of them and to the appointing authority who shall be appointed for this purpose by the employer (Bank of Baroda) be referred for adjudication to a sole arbitrator to be appointed as herein after provided.

For the purpose of appointing the sole arbitrator referred to above, the appointment authority will send within thirty days of receipt by him of the written notice aforesaid to the contractor a panel of three names of persons who shall be presently unconnected with the organization for which the work is executed.

The contractor shall on receipt by him of the names as aforesaid; select any one of the persons named to be appointed as a sole arbitrator and communicated his name to the appointing authority within thirty days of receipt of him of the names. The appointing authority shall there upon without any delay appoint the said person and the sole arbitrator. If the contractor fails to communicate such selection as provided above within the period specified, the appointing authority shall make the selection and appoint the selected person as the sole arbitrator.

If the appointing authority fails to send to the contractor the panel of three names as aforesaid within the period specified, the contractor shall send to the appointing authority a panel of three names of persons who shall be unconnected with either party. The appointing authority shall on receipt by him of the names as aforesaid select any one of the persons named and appoint him as the sole person and appoint him as the sole arbitrator within 30 days of receipt by him of the panel and inform the contractor accordingly, the contractor shall be entitled to appoint one of the persons from the panel as the sole arbitrator and communicate his name to the appointing authority.

If the Arbitrator so appointed is unable or unwilling to act or resigns his appointment or vacates his office due to any reason whatsoever another sole arbitrator shall be appointed as aforesaid.

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 proceeding.

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

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

The fees, if any of the arbitrators shall, if required to be paid before the award is made and published, be paid half by each of parties. The costs 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 there of shall be paid and may fix or settle the amount of costs to be paid.

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

Subject to aforesaid the provisions of the arbitration Act 1940 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 proceedings under this clause.

31. Right of technical scrutiny of final bill: the employer shall have a right to cause a technical examination of the works and the final bill of contractor including all supporting vouchers, abstract 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 over paid or over certified it shall be lawful for the employer to recover the sum.

32. Employer entitled to recover compensation paid to workmen: If, for any reason the employer is obliged, by virtue of the provisions of subsection (1) of section 12 of the work men compensation Act 1923, to pay compensation to a work men employed by the contractor, in the execution f the works the employer will recover from the contractor the amount of under sub-section (2) of section 12 of the said Act, the employer will be at liberty to recover such amount or any part thereof by deducting it from the security deposit or from any sum due by the employer shall not be bound to contest any claim made against him under sub-section (1) if sectuib12, of the said act, except on the written request of the contractor and upon might become liable in consequence if contesting such claim.
33. Labour Laws/Regulations: The contractor shall employ labour in sufficient numbers directly through sub-contractors to maintain throughout the period of the contract the rate of progress required according to approved program of work and of quality to ensure proper workmanship in accordance with the specifications and drawings and the Consultant/Bank instructions.

The contractor will comply with the provisions of all Acts of Government relating to labour and the rules and regulations made there under from time to time. He shall also submit at the proper time all particulars statements required to be furnished to the labour authorities on being directed to do so by the Consultant / Bank.

The contract shall register and obtain necessary licenses, maintain all registers, records, notices and documents and submit returns as prescribed by various enactments required under various statutes Including the contract labour (Regulation and abolition) Act, 1970 and rules made there of all the statutory regulations that are in time in all matters concerning this contract.

The contractor will also comply with all the rules and regulations stated in the minimum wages Act 1948 and the subsequent amendments. The contractor shall indemnify the employer against any liability that may arise due to the noncompliance of any provisions under minimum wages act 1948 or any enactment affecting the work contemplated under the contract.

34. Apprentice Act: The contractor shall comply with the provisions of the Apprentice Act 1961 and the Rules and Orders issued there under from time to time. Failure to do so will amount to a breach of contract and the employer may in his discretion terminate the contract. The contractor shall also be liable for any or other liabilities arising on account of any violation by him of the provisions of the Act.
35. When Contractor Dies: Without prejudice to any or remedies under this contract, if the contractor dies, the employer shall have the option of terminating the contract without compensation to the contractor.
36. General Indemnity: The contractor shall indemnify the employer from and against all claims, demands, proceedings, damages, costs and expenses which may be brought or made against employer or to which it may be put by reason of the contractor not conforming to or complying with any of the provisions or requirements of any Act or Status, Central or State, Rules, Regulations, Bye laws of Local Authorities, Panchayat, Collector or any companies relating to or in connection with the works or to labour or for supply of water ,light or other amenities at the site

#### WATER AND ELECTRICITY FOR EXECUTION OF WORK:

The Bank shall provide water and electricity as existing to the contractor for minor tools for the purpose of execution of various works and the charges will be deducted from his bills. Any further requirement and in case of power shutdowns or in any other eventuality where in the Bank is not able to provide the above, contractor has to make his own arrangements.

#### CONTRACTOR TO INSPECT SITE:

The contractor shall visit and examine the construction site and satisfy himself as to the nature of the existing roads or other means of communication and shall obtain generally his own information on all matters affecting the execution of the work. No extra charge made to consequence of any misunderstanding or incorrect information on any of these points or on the 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 claims for reimbursement there of shall be entertained.

#### ACCESS FOR INSPECTION:

The contractor has to provide at all times during the progress of the works and the maintenance period, proper means of access, with ladders, gangways etc. and the necessary attendance to move and adopt the same as directed for the inspection of measurements of the works by the Bank/Architects or his representatives.

#### PAYMENT OF MOBILISATION ADVANCE:

No mobilization advance shall be paid.

#### SAFETY CODE

1. The contractor shall maintain in a readily accessible place "FIRST AID APPLIANCES" including adequate sterilized dressing and cotton wool.
2. The injured person shall be taken to public Hospital without loss of time, incase where the injury necessitates hospitalization.
3. Suitable and strong and scaffolds should be provided for workmen for all works that cannot safety be done form ground.
4. No portable single, ladder shall be over 9 meters in length. The width between the side rails shall not be less than 30cm (clear) and the distance between two adjacent rungs not more than 30 cm. When a ladder is used an extra helper shall be engaged for holding the ladder.
5. Providing suitable fencing or railing, the minimum height of which shall be one meter, shall provide every opening in the floor of a building or in a working platform with suitable means to prevent the fall of persons or materials.
6. No floor, roof or any other part of the structure shall be so loaded with Materials as to render it unsafe.
7. Workers shall be provided with protective glasses, footwear and rubber hand gloves wherever required.

Those engaged in welding works shall be provided with welder's protective eye and gloves.

- i) No paint containing lead or lead products shall be used except in the form of paste or ready-made paint.
- ii) Suitable facemasks should be supplied for use by the workers when the paint is applied in the form of spray or surface having lead paint if dry rubbed and scraped.

Overalls shall be supplied by the contractor to the painter and adequate facilities shall be provided to enable the working painters to wash themselves during the period of cessation of work.

Hoisting machines and tackle used in the works including their attachments anchorage and supports shall be maintained in perfect conditions.

Ropes used in hoisting or lowering materials or as a means suspension shall be of durable quality and of adequate strength and free from defects.

#### GENERAL AND TECHNICAL SPECIFICATIONS

1. These specifications are for the work to be done. Items to be supplied and materials to be used in the works as shown and defined on the drawings and described herein all under the supervision and to the satisfaction of the Consultant/Bank.
2. The workmanship is to be the best available and of a high standard, use must be made of 'Specialist' tradesman in all aspects of the work and allowance must be made in the rates for doing so.
3. The materials and items to be provided by the contractor shall be the best of their respective kinds and as approved by the Consultant/Bank in accordance with the samples which may be submitted for approval and generally in accordance with the specifications.
4. Samples of all materials including those specified by name of the manufacture or the brands, trades name or by the reference to catalogue Nos. are to be submitted to the either orders delivers in the bulk to site. Samples together with their packing are to be provided by the contractor free of any charge and should any materials are rejected, the same will be removed from the site at the expense of the contractor.
5. The contractor is also required to submit specimen finishes of all colours, fabrics, polish shades etc, for approval of the Consultant/Bank before proceeding with such works.
6. Should it be necessary to prepare shop drawings, the contractor at his own expense prepare and submit at least four sets of such drawings to Consultant/Bank for approval
7. The contractor shall produce all invoices, vouchers or receipts account of all purchases done by him for materials if called upon to do so either by consultants or the Bank.

The contractor should verify all measurements given in the drawings at the site before commencing the work. Any difference should be clarified with the Consultant before commencing the work.

Partition line out shall be done at the site before starting the work and got approved from the Consultants.

The contractor shall submit a Bar chart (CPM method) for the project scheduling within one week of letter of acceptance of tender or one day prior to commencement of work whichever is earlier and get the same approved from Consultant/Bank in advance to co-ordinate the work with other agencies.

In order to complete the work in time, the contractor may have to work in more than one shift and beyond office hours. He will do so without any extra charges and without causing any disturbance/inconvenience to the neighborhood.

The contractor shall make necessary security arrangements at the site for the safety of his tools, materials and equipment etc, his own cost.

The contractor shall quote his rate including the cost of materials as specified, corresponding wastages, labour, sales tax or any other taxes & duties, octopi, transportation to work site etc. There shall be no claims on account of idling of labour.

Timber: Hardwood or Teakwood shall be the best wood locally available and should be well & properly seasoned of mature growth free from worm holes, large loose or dead knots or other defects and will not suffer warping, spilling or other defects through improper handling.

Teakwood to be either CP or Ballarshah and shall be best quality, free from soft heart, worm & bee holes and other defects. All wrought timber is to be sawn, planned or works to correct sizes and shapes as shown in the drawings. An allowance of 2mm shall be permitted for each wrought face.

All wooden members shall be liberally coated and treated with anti-termite paint before fixing.

Plywood: Plywood shall be of approved BWP type, make, brand etc, Thickness of plywood shall be as per details given in the drawings/specifications.



Workmanship for joinery: Timbers is to be cut to require size and length and the joinery should start immediately after the line out is finalized. It should be framed up (but not bonded) and stored until required for fixing in position. At this stage it should be bonded and wedged up. Any portion that warps or develops shakes or other defects shall be replaced before wedging up. The whole work is to be framed and finished to a proper line or level and as detailed in the drawings and fitted with all necessary metal ties straps bolts, screws. Twinning bonded joints are to be cross-tongued with teak tongues / dove tailed.

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

Laminate sheeting shall be of specified thickness, make and either plain, suede, satin or with design finish and samples showing the surface texture and pattern are to be submitted in proper sizes for approval before use.

The laminates shall be fixed with proper adhesive of approved grade and brand.

The contact surfaces of dowels, tennos, wedges etc, shall be glued with proper adhesive. Where ever joinery and carpentry works is likely to come in contact with moisture the adhesive shall be waterproof.

Dealing with Bulging / air entrapped in lamination work;-

No bulging / air bubbles shall be allowed for lamination work. Wherever these bubbles develop due to poor workmanship or any other reason, such portions of work shall be stripped of the old lamination & re-done to the satisfaction of the Architect/ Bank.

Hardware: Shall be of approved make and quality, samples of each and every hardware item should be submitted and got approved before using. This hardware shall generally confirm to following:

Butt Hinges: Shall be either brass oxidized aluminum with pins and washers heavy duty type or as specified.

Mortise Locks: Seven levers of Superior brand / equivalent of Godrej only.

Tower bolts: Brass heavy gauge with brass screws only.

Glass & Glazing: The glass used for glazing shall be plain, complying with IS: 3548 unless otherwise specified.

The glass shall be free from any defects such as bubbles, undulations, waves and cracks etc.

Painting & Polishing: All materials required for this work shall be of specified and approved manufacturer, delivered to the site in manufacturer's containers with seals etc. Unbroken and clearly marked with manufacturers name of trademark with a description of the contents and colours. All materials to be stored at the site.

All brushes, tools, pots, kettles etc, used in carrying out the work shall be clean and free from foreign matter.

Surfaces of the new woodwork that are to be painted are to be robbed down. Knotted and stopped to the approval of Consultant/Bank.

Surfaces of previously painted wood work which are to be repainted shall be cleaned with soap solution of approved solvent to remove dirt, grease etc. Whilst wet the surface shall be flatted down with suitable abrasive and then rinsed down and allowed to dry. Minor area of defective paint shall be removed by scrapping back to a firm edge and the exposed surface touched in with primer as described and stopped with putty. Where the wood mark has been previously painted or polished and is to be newly polished, the same shall be prepared with scrapping, burning off or rubbing down. Surfaces of previously painted metal surfaces which are to be repainted shall be cleaned, flatted

down and any rust and loose scale shall be removed completely by chipping, scrapping and wire brushing back to bare metal and touched in with primer as directed by Consultant.

Aluminum sections: Aluminum sections shall be factory extruded out of aluminum ingots with smooth finish without any defects like pore, roughness' etc, and shall be accurate in size, shape and weight etc.

List of INDIAN STANDARDS referred to:

IS: 1200:	Latest Measurements of buildings & Civil Engineering works, Methods of
IS: 287 1973	Recommendation for Maximum permissible Moisture Content of timber.
IS: 1411 1973	Code of practice for seasoning of timber.
IS: 3845 1966	Code of practice for joints used in wooden Furniture
IS: 3548 1966	glazing in buildings.
IS: 1137 1965	Specifications for ready mixed paint
IS: 113 1950	Brushing matt or egg shell flat/wooden
IS: 133 1975	Coating/undercoating/finishing, grey filler etc,
IS: 110 1968	Interiors
IS: 129 1950	

**INSPECTION AND TESTING:**

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

<b>M E M O R A N D U M</b>	
Name of the work	Refer Page No. 1 (one)
Date of Commencement of work	From date of marking at site or as per work order
Period for Completion	as per work order
Value of work to be taken for issue of Interim certificate for payment	No advance payment
Retention percentage to be deducted from RA Bills	10%
Total Security Deposit	as per work order
Defect Liability Period	12 months from completion date
Refund of Security Deposit	After completion of defects liability period
Liquidated Damages	1% per week, Maximum of 10% of contract value/final bill amount.
Period of Final Measurements	30 days
Period of honoring Interim / Certificate for payment	15 days
Period of honoring final Certificate for payment.	30 days
Time of completion	15 days

<b>MODE OF MEASUREMENT</b>	
Full Height Partitions	Finished length * Finished Height (Visible measurement) However strength to be provided from structural member
Low Height Partitions	-do-
Side Units / Storage Units	-do-
Rolling Shutter	-do-
False Ceiling	-do-
Wall panelling	-do-
Blinds	-do-
Wall Cladding	-do-
Painting	-do-
Doors	Each or SFT
Tables	Each
Running Table	RFT
POP Cornice	RFT
Ledges	RFT

### PREAMBLE TO BILL OF QUANTITIES

1. Quantities mentioned are approximate and payment shall be made on actual measurements. There shall be no claim whatsoever for variations in quantities at the time of actual execution.
2. The rate of partitions and wall cladding shall include necessary additional framework supports wherever required to suit the site conditions or stability of the frames.
3. Rate for doors will include provision of Hardware like brass hinges, locks, handles, tower bolts, door stoppers etc., of approved design and make.
4. Rates for hardware to include supplying and fixing of necessary matching screws (Brass or powder coated)
5. The rates for provisions of furniture shall include for placing the required furniture in position and protecting from damage until handing over to the Bank.
6. The rates for all painting and polishing works shall include all preparation of surfaces, sand papering or rubbing down before each coat, all brushes and cleaning materials.
7. After completion of the work the site shall be cleared from all waste, rubble, left over materials etc., and thoroughly cleaned ensuring that all laminates, flooring, walls, furniture surfaces and tops etc., are spotless clean.
8. The aluminum-extruded sections shall generally confirm to dimensions given in the drawings and specifications, correspondingly ensuring the minimum weight structure as specified in manufacturer's catalogue.

## GENERAL SPECIFICATION FOR SELECTION OF ELECTRICAL EQUIPMENT, INSTALLATION TESTING AND COMMISSIONING

1. **SCOPE OF WORK:** - This specification covers Design, Fabrication of the panels and testing, insuring, loading, transporting, unloading, installing, testing & commissioning the total Electrification work.
2. **WORK EXCLUDED:** - Civil work like foundation for the equipment / panels are not included in the scope of this specification. However the successful tender shall furnish dimensional drawings and relevant data required for planning the equipment foundations, cable trenches, exhaust pipes etc. However all base channels required are to be grouted across the cable trenches and panels shall be provided by the successful tenderer.
3. **CODES & STANDARDS:** - All the supplied materials / panels / cables etc & installation shall be in accordance with the International & Indian standards, Indian Electricity rules conforming to the latest edition of the following as applicable.

B: -	159	---	Bus Bar and Bus Bar connection.
IS: -	375 – 1964	---	Switchgear bus bar, Main connection and auxiliary Wiring marking and arrangement for (revised)
IS: -	1248	---	Electrical Instruments
IS: -	2147	---	Degree of protection provided by enclosures for low Voltages Switchgear and control gear.
IS: -	2208	---	HRC Cartridge link fuse up to 600 Volts.
IS: -	2705	---	Current transformers.
IS: -	3043	---	Code of practice for Earthing.
IS: -	4237	---	General requirements for switchgear and control gear For voltage not exceeding 1000 Volts.
IS: -	5082	---	Material data for Aluminum Bus Bar and push Button.
IS: -	3072	---	Code of practice for installation and maintenance of Switchgear.
IS: -	732	---	Code of practice for electrical wiring installation (System voltage not exceeding 650 V).

### 5. SITE CONDITIONS:-

All the supplied materials / panels / switchgear / fittings / wiring cabling for installation shall be operating in tropical climate with ambient temperature of 40 degree C maximum, and with maximum 10 degree C variation, average 30 degree centigrade for 24 hours.

Extreme care shall be taken to make the enclosed totally panels vermin proof against entry of rats, lizards and other vermin. All ventilation and other openings provided in the equipment shall have suitable screen protection.

Continuity of power supply is the first consideration and the panel design shall be such as to provide facilities to simplify maintenance, inspection, testing and general repairs at site.

### 6. GENERAL SPECIFICATION FOR MEDIUM VOLTAGE POWER AND LIGHTING DISTRIBUTION BOARDS AND MISCELLANEOUS ELECTRICAL EQUIPMENT.

This Specification generally described medium voltage power and lighting distribution boards and other miscellaneous electrical equipment such as Isolators, Switches, Socket outlets etc to be used for power wiring and lighting installations.

The equipment covered by this specification is as follows:

- 415/240 V Power distribution boards
- 415/240 V Switch fuse lighting distribution board.
- 415/240 V miniature circuit breakers (MCB) lighting distribution boards

415/240 V metal clad Isolating switches  
240 V Switch socket outlet

## 7. SYSTEM VOLTAGES

- a) For power wiring and lighting installation, electrical power will be available at 415/240 V 3phase 4 wire 50HZ maximum voltage variation may be expected as +/-3%.

## 8. POWER DISTRIBUTION BOARDS

The power distribution boards are generally intended for distribution of power to various consumers in the office and shall be suitable for 415V 3 phase or 3phase and neutral 50HZ system. The distribution boards shall be either cubicle type or pedestal mounting type as specified.

### a) Cubicle type boards

i) Cubicle type power distribution boards shall be factory assembled and wired conforming to IS: 4237 & IS: 8623. The boards shall be of Industrial, Floor mounted, totally enclosed cubicle type with multi-tier compartmental arrangement housing open execution type incoming isolating switches and requisite number of outgoing switch fuse/fuse switch units. Alternatively moulded case circuit breaker (MCCB) unit may be provided in incoming and outgoing circuits as specified. The degree of protection provided by the enclosure shall be in accordance with IS 2147 and conforming to IP50 or IP54 as called for in the Technical specification. The unit shall be of pressed sheet steel having minimum thickness of 2mm with rubber gasket at all joints and openings including doors. All bolted joints shall be provided with toothed/spring washers to ensure good earth continuity. It shall have a series of cubicles of uniform height placed side by side with front access for operation as well as cabling. The maximum operating height of the switches on the panel shall not exceed 1900mm and minimum operating height shall not be less than 400mm. The board shall be supplied along with base frame made of minimum 50mmx25mm Ms Channels.

- ii) The incoming and outgoing switches are MCCBs shall be arranged in tier formation to accommodate each unit in a separate compartment with gasketed hinged door. The door of individual compartment shall be interlocked in such a way that it can't be opened when the MCCB in the ON position. The "ON" and "OFF" positions of the switch handle shall be distinctly indicated. Modular construction shall be adopted to cater for different sizes of MCCBs. The switch board shall be of easily extensible type. Each PDB shall be provided with one 100 A and one 63 A TPN spare switch fuse/fuse switch unit or two numbers 100A TP MCCB.

In case of switch fuse distribution boards, the switches shall be of load break AC 23 category conforming to IS: 4064 (part-1) having fully shrouded contacts. The isolator for the switch fuse units shall be on the busbar side and fuse on the load side. Rotary type switches may be used for rating upto 63A. The switch fuse units shall be provided with non-deteriorating type HRC fuse links having rupturing capacity not less than 46 KA conforming to IS: 2208.

- iv) In case of MCCB distribution boards, the MCCBs shall have all live parts totally enclosed in heat resistant moulded insulated housing have terminals accessible for external connections, but well shrouded against accident contacts. The units shall be generally designed, manufactured and tested according to IEC: 157-7 and shall be of manually operated type with quick make, quick break trip – free mechanism. The MCCBs shall be provided with direct acting adjustable thermal overload and magnetic short-circuit releases having breaking capacity not less than the short-circuit fault level at the bus bars of the distribution boards or as specified. The MCCB shall be selected from four frame sizes viz., 100,250,400 and 600A.

- v) Separate bus bar compartment provided on the top and/or sides bolted cover. The bus bars shall be so arranged that they are easily accessible from the front of the cubicle. The main bus bars shall have continuous current rating as specified but in no case less than the current rating of incoming isolator. However, neutral bus bars shall have half the full load rating of the phase bus bars. The bus bars shall be of electrical purity aluminum or aluminum alloy conforming to IS: 5082. The bus bar sizes shall be so selected that the temperature rise over 45oC ambient does not exceed 45oC as measured by thermometer. The bus bars shall be properly supported with high quality non- hygroscopes insulating material having good

ELECTRICAL & mechanical properties suitable for the applicable voltage grade and of adequate mechanical strength so as to withstand without damage effects of maximum available short-circuit current. Moulded bus bar supports made of glass reinforced thermo-

setting plastic materials will be preferred. Bus bar supports shall have adequate creepage distance and anti tracking provision.

The PDBs shall be selected from three categories having bus bar suitably designed to withstand a through-fault current of 10KA, 25KA and 40KA. The selection shall be based on the available short circuit current at point where PDB is proposed to be used in the system. The bus bars shall be properly spaced to facilitate taking vertical connections to individual units. Tapping to the individual units from the bus bar shall be by means of taped bus bars. Arrangement and marking of the bus bars and main connections shall be as per IS: 375. The Connection between bus bar and other connection made of different metal as well as their connections with the terminals of the equipment shall be made in such a way, as to prevent corrosion and local heating.

- vi) Generally incoming and larger outgoing units will be located at the bottom-most tier and cables shall be directly terminated to the equipment terminals. For terminating multiple cable directly to the equipment terminals, extension pieces as required shall be provided. Outgoing power cables from the upper compartments shall be brought out to the terminal blocks located in the vertical cable compartments. Liberal space shall be provided in the cable compartments as well as in the bottom most tiers to facilitate termination of cables. Cable compartment shall be provided with bolted cover plates. Detachable cable gland plates shall be provided both at the top and bottom of cable compartments as well as the bottom most compartments. Provision shall be made in all cable compartments for clamping cables so as to facilitate cable termination to individual units.
- vii) Wherever specified, AC magnetic contractor shall be incorporated in the incoming and outgoing feeders of the board for remote switching. The contractor shall be housed in the same compartment of incoming/outgoing switches on MCCBs. The contractor shall be of study construction with double break silver tipped contacts conforming to IS: 2956 and shall be of AC3 utilization category.
- viii) For termination of power cable in equipment terminals/terminal blocks, compression type cable lugs suitable for aluminum conductor cables shall be provided. Die-cast aluminum alloy or brass cable glands suitable for PVC insulated, PVC sheathed armored/unarmored cables shall be provided in the cable compartments.
- ix) The PDB having two incoming switches/MCCBs shall have bus-section isolating switch/MCCB key interlocked with the incoming switches/MCCBs in such a manner that bus section switch/MCCB can be closed only when one of the incoming switches is open. Incoming and bus-section switches/MCCBs shall be housed in separate compartment.

The PDB shall have an indicating voltmeter selector switch connected to incoming feeder with easily accessible voltmeter fuses. Ammeters with selector switches shall be provided in each incoming feeder. These instruments shall be flush type located on the front door of the compartments.

Suitably engraved identification labels and inscription plates shall be provided for each circuit as well as for the boards.

One continuous earth bus shall be provided in the bottom part of PDB along the full length of the board with two bolted type earthing terminals to comply with the requirements of Indian Electricity Rules. Proper danger plates shall also be provided on each board.

**b. Pedestal mounting type switch-fuse distribution board.**

- 8.2.1 The pedestal mounting type distribution board shall be supported on pedestals made of steel sections and shall be of industrial metal clad dust-proof, totally enclosed design having specified number and sizes of fuse-switch or switch fuse units arranged on top and bottom of bus bar chamber.

The height of the stands shall be such as to permit proper termination of cables for the switches mounted above the bus-chamber and the same time keep the switches operating handles, both below and above the bus-chamber at convenient heights.



8.2.2 The supporting arrangement and other constructional and design features of the bus bars shall be similar to that described in item 8.1.5. Switch fuse units shall be of load-break type as specified under item 8.1.3 above and shall be mounted on the bus bar chambers by means of flanged throat arrangement.

Wherever called for, suitable key interlocking shall be provided between two incoming or two incoming and bus-section switches. All switches mounted on the top of the bus bar chamber shall be provided with detachable type reverse entry adapter boxes. Wherever required switch mounted at the bottom of the bus bar chamber shall also be provided with suitable adapter box to facilitate termination of cables.

Cable lugs and cable glands shall be as specified under item 8.1.8.

Identification labels and inscription plates etc shall be as specified under item 8.1.11.

Earthing arrangement and danger plates shall be as specified under item 8.1.12 above.

For terminating multiple cables directly to the equipment terminal extension pieces as required shall be provided to permit connection and disconnection of each individual cable without disturbing other cables.

9.0 Switch fuse lighting distribution boards:

The Switch fuse lighting distribution boards shall be either enclosed cubicle or pedestal mounting type as specified suitable for 415/240V, 3-phase and neutral system.

9.1 Cubicle type boards

The constructional and design feature of the distribution boards shall be similar to that described in item 8.1 above for cubicle type power distribution boards except that the switches shall be of AC 22 or above category conforming to IS:4064(part).

9.2 Pedestal mounting type switches Lighting distribution boards.

The constructional and design features of the distribution boards shall be similar to that described in item 8.2 above for pedestal mounting type Switch fuse power distribution board except that the switches shall be of AC 22 or above category conforming to IS:4064(part).

10. Miniature circuit-breaker lighting distribution boards.

The lighting distribution boards with miniature circuit breakers (MCB) shall be suitable for 415/250V, 3-Phase and neutral or 240V single – phase and neutral system.

The lighting distribution board shall generally comprise incoming isolating switch or MCB isolator, requisite number of outgoing miniature circuit – breakers and adequately rated bus bars.

The boards shall be of industrial, totally enclosed dust-proof, wall mounted, sheet cubicle design. The boards shall have welded back and sides gasketed hinged door at the front with door handle having suitable locking device. Detachable cover plates shall be provided at the top and bottom with suitable gaskets for cables entry. For boards with incoming isolating switch, the access to the Operating handle shall be from the front of the cubicle without opening the front door. Operating knobs of both incoming MCB isolators and outgoing MCB shall be accessible only after opening the front door of the cubicle. Protective insulated cover plate shall be provided inside the cubicle to shroud all the live parts with only the operating knobs of the MCBs protruding outside the cover plate. As far as possible the board shall also be dust-proof in door-open position, adequate space shall be provided within the board to facilitate termination of incoming and outgoing cables. The board shall be factory wired and assembled. Where specifically called for, the boards shall be of special weatherproof design suitable for outdoor installation.

The incoming isolating switch shall be similar to that specified in item 10.1.3 above except that the switches shall be of AC 22 or above category conforming to IS:4064 (part-1).

The miniature circuit-breaking shall be heat resistant plastic moulded type generally designed manufactured and tested as per IS: 8828 – 1978. Unless specified otherwise all MCBs shall be provided with quick break trip free mechanism and direct acting thermal overload and short-circuit trip elements. The short-circuit breaking capacity of the MCBs shall not be less than 9,000 A at 0.8 power factor. The MCBs shall be suitable for operation in an ambient of 45°C without excessive derating. Single – phase MCBs, which

are not provided with built – in phase barriers, and mounted adjacent to each other and connected to different phases, shall be provided with adequate insulated phase barriers. The type, arrangement and other design and constructional in item 10.1.5 above. For direct entry of cables, cable gland suitable for PVC insulated, PVC sheathed armored / unarmored aluminum conductor cables shall be provided. For cable entry through conduits detachable top and bottom plates shall provided. Cable terminals shall be suitable for aluminum conductor cables and so arranged to enable connecting and disconnecting of each circuit without disturbing any other circuits. Compression type aluminum cable lugs shall also be provided. To facilitate termination of cables in the incoming MCB isolators and above 30 A outgoing MCBs suitable terminal connectors shall be provided. Wherever called for terminal blocks of adequate capacity/sizes shall be incorporated for the incoming/outgoing cables. Identification labels and inscription plates etc shall be as specified under item 8.1.11 above. Earthing arrangement and danger plates shall be as specified under item 8.1.12 above.

11. 240V SWITCH SOCKET OUTLET

Socket outlet for 240 V supply shall be of 3-pin (two-pole and one earth) non-reversible, metal-clad, dust-proof, industrial type suitable for horizontal insertion type. 240V socket outlet shall be controlled by rotary type switch / MCB mounted on the socket outlet box. Operating handle of the rotary switch shall be fixed in such a manner that it will not be possible either to insert or to withdraw the plug without switching off the supply. All socket outlets shall be supplied with heavy-duty type plug and cap with chain. The isolating switches shall be of category AC 22 or above conforming to IS: 4064 (part-1). Manually operated industrial type. The isolator shall be housed in dust and vermin-proof sheet steel enclosure suitable for terminating aluminum conductor cables either directly or through conduits and shall be provided with compression type lugs. The isolator handle shall be interlocked with the door.

Inscription plate shall be provided indicating the voltage rating for the switch socket outlet.

12. LIGHT FITTING AND ACCESSORIES

General

12.1.1 All light fittings and accessories shall be manufactured from best quality materials the light fittings and accessories shall be designed, manufactured and tested in accordance with the following Indian Standards in so far as they are applicable.

1. IS: 1913 (part –1)-1978-General and safety requirements for luminaries. Tubular fluorescent lamps.
2. IS: 2418 (part 1 & 2)-1977-specification for tabular fluorescent lamps for general lighting service.
3. IS: 418-1963- Tungsten filament general service electric lamps.
4. IS: 1534 (part 1) – 1960 – Ballast for fluorescent lamps for switch starts circuits.
5. IS: 1569 – 1976 – Capacitors for use in tubular fluorescent lamps, high pressure mercury and low pressure sodium vapor discharge lamp circuits.
6. IS: 2215 – 1968 – Starters for fluorescent lamps.
7. IS: 3323 – 1965 – Bi pin lamp holders for tubular fluorescent lamps.

12.2 Fluorescent fittings:

Fluorescent fitting shall be supplied complete with copper wound ballast, Starter, bi-pin spring loaded holder & power factor improvement capacitor suitable for switch start fluorescent tube lamp and shall be fully wired.

The fluorescent light fittings shall be specified below:

- i. Industrial trough type fluorescent fittings suitable for twin 40 W single 40 W fluorescent lamp, having vitreous enameled heavy gauge sheet steel reflector, finished and grey stove enameled channel similar to Philips type no. TKC --24, Crompton type No. IVE, Bajaj type no. BJIV, K-lite No.KL – B or equivalent.
- ii. Industrial trough type fluorescent fitting as specified against item 9.2 (a) above but with stove enameled heavy gauge sheet steel reflector similar to Philips type No.TKC – 22, GEC type No.FH – 23, Crompton type No.ISE, Bajaj type No.BJIE, K-Lite type No.KL – IS or equivalent.
- iii. Decorative recess mounting type Mirror optic wide spread fitting suitable for false ceiling with electro chemically brightened and anodised aluminum reflector assembly suitable for 2Nos 36W or 1 Nos 36W fluorescent tube but without tube, duly wired with electronic ballast, rotor type bi pin holder similar to Philips type No.TBS 518, Crompton CRFG, K-Lite type No.KL – RMWST or equivalent.

12.3 LAMPS

All lamps shall be of high lumen output and with long life. The successful Tenderer will have to give guarantee for the lamp performance.

#### Incandescent Lamp

All general service incandescent lamps shall be gas filled, clear finish and where ever possible, should be of coiled coil type. Incandescent lamp cap shall be of BT.

#### Fluorescent Lamp

All fluorescent lamps shall be of day light type (unless otherwise specified) and shall be suitable for switch – start with bi – pin type cap.

#### 12.4 Ballast

The ballast shall be well tried out design to give trouble free operations With long life having provisions for suitable tappings in steps. The ballast must be able to dissipate sufficiently the heat developed in the windings and therefore provisions for good heat conduction from the coil to the case of the ballast shall be made. The ballast shall be of polyester filled copper wound having minimum power loss and the temperature rise shall be within Permissible limits and in conformity with IS: 6616 – 1972.

#### 12.5 Electronic Ballast

The Ballast shall be well tried out design to give trouble free operations with long Life conform to BIS specifications, tested at ERTLkolkata or CFRI, Bangalore. The Ballast loss should be less than 2 W and efficacy of more than 6.5 Lumen / Watt. Operating voltage range between 100 and 250 V A.C.

#### Capacitor

Capacitor shall consist of element wound from layers of high purity aluminum foils and loss capacitor paper contained in aluminum cylindrical can. The capacitor shall be vacuum dried under high vacuum and impregnated. The can shall be hermitically sealed and shoulder lug terminal provided over porcelain insulators. The capacitor shall conform to IS: 1569 – 1976.

#### Lamp holder

The lamp holders shall have well spring contacts engaging positively with the pins of the lamp and preventing the lamp from extinguished due to vibration. The holders shall be such that the lamps can be removed easily whenever required for cleaning or for replacement purposes.

For fluorescent lamp, bi-pin lamp holders shall be provided. The starter holders shall be well tried out design and robust construction with provisions for easy insertion and removal of the starter ensuring correct starter contacts by means of strong spring action for incandescent lamps.

#### 13.0 CABLE LAYING

Cable shall be laid in cable trenches/trays already provided by the premises owner. Any trenches and trays required shall be brought to the notice and necessary routing approvals and shall be taken before the cables are laid.

Bending of cables shall be laid in accordance with the manufacture's recommendation of cable bends.

Extra length of cable shall be provided on both ends for future maintenance works.

The cables should be supported and clamped at regular intervals.

All cables shall comply with IS 1554 (part 1) 1976, for 650/1100V.

#### 14.0 CABLE TERMINATION

All cable ends are terminated with single compression cable glands with suitable size lugs crimped. All lugs shall be of copper / Aluminum as required.

#### 15.0 CONDUITS

All conduits used shall be rigid PVC with 1.5mm thickness PVC and shall be of reputed grade quality.

All conduits laid shall be clamped at regular intervals.

Separate conduits shall be laid for UPS lighting, UPS Sockets and general wiring.

Any joints in the wiring shall be jointed properly in the junction box with proper insulation type etc.

If rigid PVC conduit is not accessible for installation due to short bends etc, Flexible PVC conduit shall be used for that particular length.

#### 16.0 WIRES

All conductors are drawn from electrolytic grade copper bunched and Insulated with PVC compound, which is resistant to moisture, oil, alkalis and grease, PVC insulation shall have high insulation resistance value. The color for PVC insulation for different phases, Red, Yellow, Blue and

- for Neutral, Black and for Earth, Green is mandatory.
- 17.0 SWITCHES & SOCKETS  
All switches and sockets shall be of modular plate switches.  
All UPS connected switches and sockets shall be of different colored front plates and uniform in all the areas. General power connected switches and sockets front plates shall be of white color only.
- All sockets shall have shutters.
- All plastics should be fire retardant and self-extinguishing
- All conduits shall be of silver plated conduits.

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

THE HVAC (AIR-CONDITIONING) WORKS SUBJECT TO THE APPROVAL OF SAMPLES BY THE CONSULTANT

S.No.	Material Name.	Brand / Manufacturer / Recommended Make.
1.	Split Units.	Carriere/Panasonic/Voltas
2.	GI Sheets	TATA / HSL / SAIL / NIPPON DENRO,JINDAL or approved equivalent.
3.	Fire Damper	Carraire / Air Breeze/SRIFABS or approved equivalent.
4.	Vibration Isolators/Flexible Connectors	Resistoflex / Dunlop or approved equivalent.
5.	INSULATION	
	Fibre glass	UP Twiga / Kimmco / Owens corning or approved equivalent.
6.	Power Cables	CCI / ICC / Gloster / UCL/FINOLEX or approved equivalent.
7.	Control Cables	Finolex / Delton or approved equivalent.
8.	Aluminum Grilles Diffusers/ Linear Grilles	Caryaire / Air Breeze/SRIFABS or approved equivalent.
9.	Filters	Klenzaids / Airtech / Aerosol / Anfilco or approved equivalent.
10.	Cooling Coils / Heating Coils	Blue star / Rohini / Ethos / Carrier / Jaypee / Coil Company / ZECO or approved equivalent.
11.	Nitrile rubber	Armaflex / vedoflex /AERO FLEX/ARMACELL or approved equivalent.

APPROVED MAKES FOR LAN WORKS		
S.Nos.	Name of the materials	Approved make.
1.	Cat6 E UTP cable	D-Link / Legrand
2.	PVC casing/pipe/flexible pipe	Modi
3.	Cat6 24-Port jack Panel	D-Link / Legrand

4.	Cat6 Information out Let, Faceplate with SMD	D-Link / Legrand
5.	Cat6 Mounting Cord 3ft (1Mtr) Factory made	D-Link / Legrand
6.	Cat6 Mounting Cord 7ft (1Mtr) Factory made	D-Link / Legrand
7.	12U Communication 9U Rack with Cable Manager, Cantilever shelf, Power manager, mounting fasteners pack of 20, Front Glass Door and Lock	Wall rack

<b>APPROVED MAKES FOR INTERIOR FURNISHING WORKS</b>		
<b>S.NO</b>	<b>Name of the materials</b>	<b>Approved make</b>
1	MDF board	Nuwud (Interior grade IS 12046)
2	Particle board	Ecoboard / Novopan
3	Floor springs / Door closers	Everite / Hardwyn
4	Glass	Modiguard / Saint Gobain
5	Laminate	Greenlam / Formica /Bravia /Sun mica
6	Veneer	Century
7	Fabric	Harmony / Bombay Dyeing
8	Plywood (BWP grade)	Greenply/Century Ply/Blue Apple Ply
9	Synthetic enamel	Asian / Berger / Nerolac
10	Plastic emulsion paint	Asian / Berger / Nerolac
11	Locks	Godrej / Efficient gadget
12	Melamine	Asian / ICI Dulux
13	Adhesives	Fevicol
14	Hardware	Efficient gadgets / Earl Behari
15	Distemper Paint	Asian / Berger / Jenson & Nicholson
16	Blinds	Vista Levolor / MAC
17	False Ceiling	Indian Gypsum SAINT GOBIN( G.I frames included)
18	Beeding	Beach wood

<b>APPROVED MAKES FOR ELECTRICAL WORKS</b>		
<b>S.Nos.</b>	<b>Name of the materials</b>	<b>Approved make.</b>
1.	Wires FRLS	Finolex /Polycab
2.	Switches / Sockets RJ 11 6a Jacks	Anchor Roma /Wipro-north west-nowa
3.	MCB's&DB's	MDS /Legrand / Hager
4.	MCCB	Legrand /EE
5.	Light Fittings	Philips/Havells

6.	Power Cables	Finolex/Poly Cab
7.	Telephone Cables	Finolex/ Delton/National
8.	MS Conduit	Gupta/Bharat
9.	SFU	L&T / GE Seimens
10.	Change over switch	HPL / Standard
11.	PVC Conduit	Sudhakar / Precision / Eq .
12.	Ceiling Fans	Crompton / Havells /Usha
13.	Exhaust Fan	Crompton / GEC
14.	Casing & Capping	Modi
15.	Kitkats	Havells / Anchor
16.	Meters	AE / Rishaba / IMP
17.	Music System	Philips / Bose

Note: The tenderer shall ensure that only approved materials are used. Where necessary he may have to produce proof of using approved makes through original receipts, letter from the manufacturer or authorized dealer etc. Though choices are mentioned above, please note that the Consultant / Bank reserves the right to choose.

#### DECLARATION

I/We have inspected the site of works and have made me / us fully acquainted with the local conditions in and around the sites of works. I/We hereby declare that I/We have gone through the conditions laid down in the Notice Inviting Tender, Conditions of Contract, Technical Specifications and understood the same and on the basis of the same I/We quoted our rates in the Schedule of Quantities attached with the tender documents.

I/We shall also uniformly maintain such progress as may be directed by the Employer / Architect to ensure completion of same within the target date as mentioned in the tender document.

Witness:

Signature of Tenderer

Address and Date