

INDIAN BANK
FGM Office,
1st Floor (New Building)
Hazaratganj, Lucknow

PART I – TECHNICAL BID

NOTICE INVITING TENDER (NIT)

FOR

SELECTION OF CONTRACTOR

FOR

PROPOSED REPAIR & RENOVATION OF HOSTEL ROOMS, RELATED CIVIL WORKS ALONG WITH NECESSARY INFRASTRUCTURE, INTERIOR WORKS EXTERNAL PAINTING, WATER PROOFING, ELECTRICAL WORKS, AIR- CONDITIONING WORKS, REPLACEMENT OF LIFT (1 NO) IN STAFF COLLEGE, LUCKNOW CAMPUS AT PLOT No.:485-486-487, SECTOR 21, INDIRA NAGAR, LUCKNOW- 226016.

TENDER ID.: FGM/LUC/EST/STC/2025-26 -01

Last date for submission of Bid	19.03.2026 upto 15:00HRS at Indian Bank ,FGM Office Lucknow, Estate Department, 1 ST Floor, New Building, Hazratganj, Lucknow -226001
Date of Opening of Technical Bid	19.03.2026 at 16:00HRS at Indian Bank , FGM Office Lucknow , Estate Department, 1 ST Floor, New Building, Hazratganj, Lucknow -226001
Date of Opening of Financial Bid	Will be intimated later only to Prequalified bidder only
Cost of Tender	Rs 1000/- (in form of DD / IOI payable at Lucknow)

TENDER SUBMITTED BY:

Name / Address of Tenderer: Date:

Place:

ARCHITECT & CONSULTANTS

M/S SANDEEP GOVALKAR DESIGN ASSOCIATES

ARCHITECTS – INTERIOR – LANDSCAPE CONSULTANTS

A3/301-302, SHIVCHHAYA, GILBERT HILL ROAD,

ANDHERI WEST, MUMBAI – 400 058.INDIA.

CELL: 098211 73563/ 09969699169/8828121133

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SECTION 1 NOTICE INVITING E-TENDER

 Tender ID. **FGM/LUC/EST/STC/2025-26 -01**

Dated: 27.02.2026

Indian bank invites sealed tender on item rate bids under 2 bid system (Technical Bid & Financial Bid) from established/ eligible Contractors Complying minimum eligibility for the following works:

Name and Description of work	Estimated cost Excluding GST(Rs.)	Completion period of Work	Tender document fee / e-tender processing fee	Last date & time to submission of tender	Bid Security (EMD) amount (Rs.)
Proposed repair & renovation of hostel rooms, related civil works along with necessary infrastructure, Interior works external painting, water proofing, electrical works, air-conditioning works, replacement of lift (1 no) in Staff College, Lucknow Campus At Sector No.:485-486-487, Sector 21, Indira Nagar, Lucknow-226016	Rs.6.36 Crore	12 Months	NIL	19.03.2026 up to 5.00 PM	Rs.12.72 Lakh

The Tender Documents can be downloaded from the Bank's website (www.indianbank.in) under Tender Column.

The tenders should be submitted in sealed covers each separate with the superscription giving the Name of the work. The EMD (in the form of D.D favoring Indian Bank, payable at Lucknow) shall be enclosed in the Technical Bid documents. Tenders submitted without EMD will be rejected

Client reserves the right to accept or reject any bid without any reason and to restrict the list of qualified bidders to any numbers deemed suitable by it, if too many bids are received satisfying the laid down criteria.

Prospective bidders are advised to regularly go through Indian Bank Website www.indianbank.in as update/corrigendum/amendments etc., if any, will be notified on this portal only and separate advertisement will not be made for this.

CHIEF GENERAL MANAGER
FGM :LUCKNOW
FGM Office,
1st Floor (New Building)
Hazaratganj, Lucknow

SECTION 2: SALIENT FEATURES OF CONTRACT

SL NO.	DESCRIPTION	DETAILS
	Tender ID.	FGM/LUC/EST/2025-26/STC -01
1	Name of work	Proposed repair & renovation of hostel rooms, related civil works along with necessary infrastructure, Interior, external painting, water proofing, electrical works, air-conditioning works, replacement of lift (1 No) in Staff College, Lucknow Campus At Sector No.:485-486-487, Sector 21, Indira Nagar, Lucknow- 226016
2	Estimated cost	Rs.6.36 Crore (Excl. GST)
3	Earnest Money deposit	Rs.12.72 Lakh In the form of D.D. favoring Indian Bank, payable at Lucknow
4	Tender Cost/ Processing Fee (Non-refundable)	NIL
5	Issue of Tender documents	Documents shall be available online at Indian Bank Website: www.indianbank.in and can be downloaded
6	Site Visit Date	From : 27.02.2026 To 16.03.2026 Time : 11:00 am to 5:00 pm
7	Pre bid meeting	Pre-bid meeting to be held on 11.03.2026 at 11.00 AM (Sharp) through WebEx Video Conferencing meet. The link for the WebEx meeting will be uploaded in bank website one day before the pre bid meeting.
		The bidders having queries/clarification regarding the tender can submit their queries at email : fgmo.lucknow@indianbank.bank.in on or before 09.03.2026
8	Last Date & Time of Submission of Bids Physical submission (Bid Due date)	19.03.2026 at 3.00 pm
9	Date & Time of opening of Technical Bids	19.03.2026 at 4.00 pm
10	Date & time of opening of Financial Bids through e-tender portal	Will be Intimated only to the pre-qualified bidders
11	Bid Validity	120 Days from the date of opening of Technical bid
12	Date of start of work	From the first date of handing over of the site or 15th day from the date of issue of Letter of Acceptance (LOA), whichever is later
13	Completion period	12 months from the first date of handing over of the site or 15 th day from the date of issue of Letter of Acceptance (LOA), whichever is later

14.	Initial Security Deposit (ISD)	2% of the Bid Amount (Including EMD amount)
15	Retention Money (RM)	8% excluding taxes
16	Total Security Deposit (TSD) ISD+RM	10 % of the project cost.(Initial Security Deposity 2% and Retention Money 8%)
17	Defects Liability period	12 months from the date of handing over of project as certified by Engineer in charge / Project Architect.
18	Period of Honoring Interim Bill	70% of the interim bill amount (excluding of GST) shall be honoured within 14 days after getting bill certificate from project architect and submitting to the bank. Balance amount payable within 30 days on getting final interim bill certificate from project architect and due verification by the Bank after deducting necessary taxes and retention amount.
19	Period of Final Payment	3 (Months) months, after issuing of final Bill Certificate by Project Architect .
20	Release of Total Security Deposit	50% of total security deposit will be returned on completion of following: i.After 15 days of the payment of the final bill. AND ii.Taking over certificate by Bank AND iii.Tenderer's removal of his materials, equipment, labour force, temporary sheds/stores etc. from the site. (excepting for a small presence required if any for the Defect Liability Period and approved by the Indian Bank) Balance 50% of retention money shall be released within 30 days after satisfactory completion of defect liability period and defects free as per the contract clauses. (Please refer the tender clause of recovery of security deposit).
21	Minimum Bill Value	Minium value Rs.50.00 Lakh (Rupees Fifty Lakh) excluding Tax OR as decided by the bank . Maximum 1 RA bill per Month.
22	Liquidated Damages	0.5% for per week of delay on the contract value subject to maximum of 10 % of contract value.
23	Recovery of Taxes	As per rules applicable from time to time
24	Site Logistics Plan	Within one week of award of work
25	Submission of Construction Schedule	Within 25 days from award of work

SECTION 3: GENERAL RULES AND INSTRUCTION FOR THE GUIDANCE OF TENDERERS

Tenders are hereby invited by, Indian Bank, FGM Office, Hazaratganj, Lucknow from established Civil, Furnishing, Electrical & HVAC Turnkey Contractors having a Head or Branch office in Lucknow (Uttar Pradesh). If the Contractor is not having its office in Lucknow, please indicate the time by which it is likely to open an office at Lucknow with documentary evidence on address and telephone number of responsible contact person for the project of Carrying out Interior furnishing renovation & Restoration/Repair works.

1. Contract documents consisting of the Prequalification criteria, drawings, complete specifications, the schedule of quantities of the various classes of work to be done, agreement, Corrigendum (if any) and the set of conditions of contract to be complied with by the persons whose tenders may be accepted, and which will also be found in the form of tenders, can be downloaded Indian, Bank's website as said above.

The Intending tenders have to enclose copy of the TDS certificate for the eligibility work as given in the tender document along with other documents.

2. Tenders should be placed in sealed cover, with the name of the project written on the envelope "Proposed repair & renovation of hostel rooms, related civil works along with necessary infrastructure, external painting, water proofing, electrical works, air-conditioning works, replacement of lift (1 No) in Staff College, Lucknow Campus at Sector No.:485-486-487, Sector 21, Indira Nagar, Lucknow- 226016." will be received by Chief General Manager/Field General Manager, Indian Bank, FGM Office ,1st floor, Hazaratganj, Lucknow,226001.
3. In case of tenders, dates of submission, opening of the tenders and the parts there of along with the superscription of the packages should be as per specific instruction in the tender notice/form.
4. Earnest money deposit (EMD) amounting to 2% of total tender amount in the form of Bankers Demand Draft drawn in favors of Indian Bank, payable at Lucknow must accompany each tender in a separate sealed cover superscripting "Proposed repair & renovation of hostel rooms, related civil works along with necessary infrastructure, external painting, water proofing, electrical works, air-conditioning works, replacement of lift (1 No) in Staff College, Lucknow Campus." EMD amount will not carry interest.

Since, it is work contract, it will not come under public procurement policy for MSE order 2012 and exemption provided to MSE will not cover.

Unless the rate is in whole rupees and followed by the words only it should invariably be up to two decimal places. While quoting the rate in schedule of quantities, the word only should be written closely following the amount and it should not be written in the next line.

5. The Indian Bank does not bind itself to accept the lowest or any tender and reserves to itself the right of accepting the whole or any part of the tender and the Tenderer shall be bound to perform the same at the rate quoted.
6. The rate quoted by the Tenderer shall be net, up to the stage of incorporation and handing over site. All taxes including Sales Tax/levy or any other tax on material or on finished works like works contract tax, Turn-over Tax, Service & Good Tax, including taxes that may be newly introduced subsequent to the tender etc. in respect of this contract shall be Payable by the Tender and the Indian Bank will not entertain any claim whatsoever in this respect. However, GST will be paid extra.
7. The Tenderer shall give a list of his relatives working with the Indian Bank along with their designations and addresses.
8. No employee of the Indian Bank is allowed to work as a Tenderer for a period of two years of his retirement from Indian Bank service, without the previous permission of the Indian Bank. The contract is liable to be cancelled if either the Tenderer or any of his employees is found at any time to be such a person who had not obtained the permission of the Indian Bank as aforesaid before submission of the tender or engagement in the Tenderer's service.
9. The tender for works shall remain open for acceptance for a period of 6 months from the date of opening of tender (Technical bid). If any Tenderer withdraws his tender before the said period, then the Indian Bank shall be at liberty to forfeit Earnest Money paid along with the tender.
10. The tender for the work shall not be witnessed by a Tenderer or Tender who himself/themselves has/have Tenderer or who may and had/have Tenderer for the same work. Failure to observe this condition would render tenders of the Tenderer tendering as well as witnessing the tender liable to summary rejection.
11. It will be obligatory on the part of the Tenderer to tender and sign the tender documents for all the component parts. After the work is awarded, the successful Tenderer will have to enter into an agreement with the Competent Authority in the INDIAN BANK.
12. The Tenderer apart from being a competent Tenderer must associate himself with specialized agencies competent on the respective field for services like Plumbing, Drainage, Electrical, Air conditioning etc.
13. The EMD of the Tenderer, whose tender is accepted, shall be forfeited in full in case he does not remit the initial security deposit within the stipulated period or start the work by stipulated date mentioned in the award letter.
14. The retention amount at 8% on the value of the bill paid will be held by the Indian Bank and will be released at the end of Defects liability period after 14 days, subject to satisfactory rectification of defects noticed, if any, and against consultant's certificate EMD & Retention amount held in our Indian Bank's books will not carry any interest.

15. The acceptance of a tender will rest with the Indian Bank and the Indian Bank reserves to itself the authority to reject any or all of the tenders received without the assignment of a reason. All tenders in which any of the prescribed conditions are not fulfilled (or) are incomplete in any respect are liable to be rejected. The Indian Bank reserves the right to accept the tender in full or in part and the Tenderer shall have no claim for revision of rates or other conditions if his tender is accepted in parts.
16. Canvassing in connection with tenders is strictly prohibited and the tenders submitted by the Tenderer who resort to canvassing will be liable to rejection.
17. All rates shall be quoted on the proper form of the tender alone.
18. An item rate tender containing percentage below / above will be summarily rejected. However, where a Tenderer voluntarily offers a rebate for payment along with sealed tender, this may be considered.
19. On acceptance of the tender the name of the accredited representative(s) of the Tenderer who would be responsible for taking instructions from the Employer / Architect shall be communicated to the Employer.
20. Special care should be taken to write the rates in figures as well as in words and the amounts in figures only, in such a way that interpolation is not possible. The total amount should be written both in words and in figures.
21. The queries on the tender document should reach the bank by email in sufficiently in advance, to ensure that the bids will be submitted without any conditions and to clarify all issues raised by the bidders.
22. Tenderer should have executed the similar works directly to the Employer. Subcontract to the Main contractor will not be eligible.
23. Successful Bidder shall adhere with Bank's rule and Regulation while working at site.

Important Note:

1. Contractor to liaison with local authorities including police for smooth and safe movement of public and staff of the bank.
2. Safety net to be provided during execution of the work as a precautionary measure against untoward incidents without any additional cost by the contractor till the completion of entire work.

SECTION 4: FORM OF TENDER

To

**CHIEF GENERAL MANAGER
FGM :LUCKNOW
FGM Office,
1st Floor (New Building)
Hazaratganj, Lucknow.**

Dear Sir,

SUB: Invitation of Tender for Proposed repair & renovation of hostel rooms, related Interior, civil works along with necessary infrastructure, external painting, water proofing, electrical works, air-conditioning works, replacement of lift (1 No) in Staff College, Lucknow Campus at Sector No.:485-486-487, Sector 21, Indira Nagar, Lucknow- 226016

Having duly examined the drawings, specifications, conditions and schedule of quantities prepared by you, and satisfying ourselves as to the location of the site and working conditions,

I/We hereby offer to execute the above works at the respective rates which I/We have quoted for the items in the Schedule of quantities and having visited / inspected the site of the said works and having acquired all the requisite information relating thereto as affecting this tender.

I/We hereby offer to execute the works specified therein at the rates specified in the Bill of quantities and in accordance, in all respects, with the specifications, designs, drawings and instructions in writing referred to in the conditions of tender, the Articles of Agreement, Special Conditions, if any, the Bill of quantities and Conditions of Contract and with such materials are as specified, by and in all other respects in accordance with such conditions in the Bill of quantities and conditions of contract so far as applicable

I/We further agree to complete the work within the stipulated time as specified in the Tender Document.

I / We understand that Indian Bank is not bound to accept the lowest tender or bound to assign any reasons for rejecting our bid.

In the event of this bid being accepted, I/We agree to enter into and execute the necessary contract required by you. I/We do hereby bind myself/ourselves to forfeit the aforesaid Earnest Money Deposit of **Rs. 12.72 Lakhs/- (Rupees Twelve Lakhs Seventy-Two Thousand only)** in the event of our refusal or delay in signing the Contract Agreement.

I / We understand that Indian Bank may award the work to more than one Contractor and I / we shall make no claims whatsoever if Indian Bank accept only a part of my / our tender.

I / We unconditionally agree to Indian Bank's conditions as stipulated in the Documents. I/We agree to keep our bid open for **120 (One Twenty) days** from the date of opening of Tender.

I / We agree that in case of my / our failure to execute the work in accordance with the specifications and instructions received from the Bank during the course of the work, Bank reserves the right to terminate my work order and recover all the dues to the Bank from the payment receivable by me. Further, I may also be barred from participating in any type of bid invited by Bank or its subsidiaries in future.

Thanking you,

Tenderer Name & Signature

Date and Company Seal

SECTION 5: SPECIAL INSTRUCTIONS TO TENDERERS

1. Time of Completion, Extension of Time & Progress Chart

a. *Time of Completion:*

The entire work is to be completed in all respects within the stipulated period. The work shall deem to be commenced within 14 days from the date of acceptance letter or date of handing over of site, whichever is later. Time is the essence of the contract and shall be strictly observed by the Tenderer.

The work shall not be considered as complete until the Architect have certified in writing that this has been completed and the Defects Liability Period shall commence from the date of such certificate. However, Bank has rights to accept or reject the certificate issued by the architect. Hence, the contractor onus to complete the works in all the aspects.

b. *Extension of Time:*

If in the opinion of the Employer/Architect / PMC the works be delayed (a) by reason of any exceptionally inclement weather, or (b) by reason of instructions from the Employer in consequence of proceedings taken or threatened by or disputes, with adjoining or neighboring owners or (c) by the works, or delay, of other Tenders or tradesmen engaged or nominated by the Employer and not referred to in the specification or (d) by reason of authorized extra and additions or (e) by reason of any combination of workmen or strikes or lock-out affecting any of the building trades of (1) from other causes which the Employer may consider being beyond the control of the Tenderer, the Employer at the completion of the time allowed for the contract shall make fair and reasonable extension of time for completion in respect there for. In the event of the Employer failing to give possession of the site upon the day specified above the time of completion shall be extended suitably.

In case of such strikes or lockouts, as are referred to above, the Tenderer shall, immediately give the Employer, written notice thereof. Nevertheless, the Tenderer shall use his best endeavors all that to prevent delay, and shall do all that may be reasonably required to the satisfaction of the Employer to proceed with the works and on his doing so that it will be ground of consideration by the Employer for an extension of time as above provided. the decision of the Employer as to the period to be allowed for an extension of time for completion hereunder (which decision shall be final and binding on the Tenderer) shall be promulgated at the conclusion of such strike or lock-out and the Employer shall then, in the event of an extension being granted, determine and declare the final completion date. The provision in clause 5 with respect to payment of liquidated damages shall in such case, be read and construed as if the extended dated fixed by the Employer were substituted for and the damage shall be deducted accordingly.

c. Progress of Work:

During the period of construction, the Tenderer shall maintain proportionate progress on the basis of a Program Chart submitted by the Tenderer immediately before commencement of work and agreed to by the Employer / Architect. Tenderer should also include planning for procurement of scarce material well in advance and reflect the same in the Programmer Chart so that there is no delay in completion of the project.

2. Defects Liability Period (DLP)

- a. It must be realized that this period is for exposure of latent defects such as settlements, shrinkages or expansion cracks, undue weathering and wear due to faulty material and workmanship.
- b. The DLP commences from the certified date of Virtual Completion issued by the Architect
- c. In specialist contracts viz. for anti-termite and water-proofing treatment and the like, where the work is warranted to remain efficient and trouble-free for five to ten years through a specific guarantee on a stamp paper, an appropriately worded amendment should be included in the contract documents to point out that the period of warranty supersedes the defects liability period stated in conditions of contract.
- d. Whenever the Indian Bank is of the view that the defects in the workmanship and/or materials used are likely to be apparent only over a long period, the Defect Liability Period may be extended as deemed fit.
- e. DLP 1 year from the Date of issue Virtual completion with at least inclusion of one monsoon after the final completion of works.

3. Date of Commencement

Normally, date of commencement shall be either 14 Days from the date the acceptance letter is issued to the Tenderer or the day, on which Tenderer is instructed to take possession of the site, whichever is later.

4. Date of Completion

Project duration 12 Months. Date of completion shall be arrived at after adding the time allowed for the execution of the work to the date of work order.

5. Liquidated Damages for Delay (LD):

The entry for the quantum of LD per week of delay, appropriate for the case in hand, should be 0.5% of the Tenderer value of work subject to max of 10%

6. Period of Final Measurement:

The entry for the period of final measurement after completion shall be made after taking into account the complexity of the work and staff available for carrying out measurements.

All hidden works shall have already been measured as the work progressed in presence of Tenders, Indian Bank's representative, Architect and or his supervisor and respective specialized consultants to check up the quality and method of installation.

It should be noted that unless a longer period is stipulated, the condition of contract generally lays down three months (maximum) from the date of completion of the contract as the period of final measurement. Even though the maximum period of three months is mentioned, it shall be endeavored to complete the measurements as expeditiously as possible.

7. Value of Work for Interim Certificate:

The minimum value of work done, entitling the Tenderer to receive an interim payment is Rs.50,00,000/-. Maximum one RA bill per Month.

8. Period of Honoring Interim Certificate:

70% of the interim bill amount (excluding of GST) shall be honoured within 14 days after getting bill certificate from project architect and submitting to the bank.

Balance amount payable within 30 days on getting final interim bill certificate from project architect and due verification by the Bank after deducting necessary taxes and retention amount

9. Period of Honoring Final Certificate:

The period shall be 8 weeks from the date of receipt of the final certificate from the Architect along with M book duly signed by Tenderer, Consultant and Architect and statutory certificates wherever necessary.

10. Retention Money:

The retention percentage (i.e. deduction from interim bill) shall be 8% of the gross value of each interim bill.

11. Total Security Deposit:

10 % of the project cost.(Initial Security Deposity 2% and Retention Money 8%)

12. Release of Total Security Deposit.

50% of total security deposit will be returned on completion of following:

- a. After 15 days of the payment of the final bill.
AND
- b. Issue of Virtual Completion Certificate by the Architect and Taking over certificate by Bank
AND
- c. Tenderer's removal of his materials, equipment, labour force, temporary sheds/stores etc. from the site. (excepting for a small presence required if any for the Defect Liability Period and approved by the Indian Bank)

Balance 50% of retention money shall be released within 30 days after satisfactory completion of defect liability period and defects free as per the contract clauses. (Please refer the tender clause of recovery of security deposit)

13. Receiving, Opening and Recording of Tenders.

Part-A tender (Technical Bid) will be opened at 15.30 hours on the same day as on the last day of the receipt. In case of postal delivery, the Tenderer has to ensure that the tender is received before the due date and time. The Indian Bank will not be responsible for the damage in transit and delay in receipt of tender if any. Date and time of opening of price bid shall be informed to the qualified tenders.

Financial bids will be opened only for the those pre-qualified bidders. The schedule opening of financials bids will be intimated to the pre-qualified bidders only.

14. EVALUATION PROCESS

Evaluation Process:

The Bids will be evaluated in the following stages:

- I. Stage 1- Preliminary & Technical Evaluation
- II. Stage 2- Financial Evaluation.

Stage 1-Preliminary & Technical Evaluation

In Preliminary Stage, EMD will be checked for veracity of Amount and Form as required by tender terms and conditions. No exemption allowed for MSME Registered Vendors.

a. Technical Bid – Eligibility Criteria

Bidders qualifying in Stage 1 will be considered for further evaluation and the Technical Bids shall be evaluated as per eligibility criteria and bidder's eligibility for the work shall be determined. If bidder is not meeting with the minimum eligibility criteria as detailed, his bid will be rejected and will not be considered for further stages of evaluation. The bidder shall also comply with the technical specification as per the tender document.

However, Client reserves the rights to restrict the list of such qualified bidders to any number deemed suitable by it.

- i. The financial Bid of only those Bidders who are technically qualified shall be opened.
- ii. The financial Bids of Bidders whose technical Bids are found unacceptable shall not be opened.
- iii. Client shall notify all the technically qualified Bidders of their technical qualification indicating the date, time and venue for opening of financial Bids.

Stage II-Financial Evaluation

- i. Evaluation Committee shall open the financial Bid of the technically qualified Bidders in presence of the Bidders/their authorized representative, who choose to attend, at the scheduled date and time.
- ii. On opening the financial Bids, the Evaluation Committee shall read out the financial Bid to all the Bidders and record the same.
- iii. The Evaluation Committee shall correct arithmetic errors, if any and sign the same. If any discrepancy is found between the amount in figures shall prevail, as in e-tender figures in words are system generated
- iv. If a tenderer quotes nil or no rate against every item in item rate tender, it is presumed that the tenderer is ready to carry out the job at the quoted rate (at Zero cost)
- v. All the financial Bids shall then be ranked according to the financial Bid in increasing order with the Bidder quoting the least amount ranked L1, Bidder quoting next higher figure as L2 and so on.
- vi. L1 will be declared as Successful Bidder and his offer will be processed further.
- vii. The financial bid of all eligible bidders as decided by CLIENT shall be opened and the decision of CLIENT will be final and binding.
- viii. The date and time of opening of financial bids shall be decided by CLIENT which will be intimated at an appropriate time.

15. Letter of Acceptance:

The Successful Bidder would be notified in writing by CLIENT by issuing the Letter of Acceptance (LOA) in favour of the Bidder.

SECTION 6: GENERAL CONDITIONS OF CONTRACT

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

1. Interpretation

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

- i. **“Application”** shall mean the response submitted by interested parties.
- ii. **“BID/Tender”** shall mean documents downloaded from the website by the prospective Bidder. The word “Tender” is synonymous with **“Bid”**.
- iii. **“Bid Security/ Earnest Money”** shall mean the amount to be deposited by the Bidder with the Tender.
- iv. **“Bid Validity”** shall mean the period for which the Bids shall remain valid.
- v. **“Bidder”** shall mean the party located in India who is participating in the Tendering process pursuant to and in accordance with the terms of this document. The word **“Tenderer”** is synonymous with **“Bidder”**.
- vi. **“Client/Bank/Employer ”** shall mean INDIAN BANK having Corporate Office, Avvai Shanmugam Salai, Royapettah, Chennai – 600 014, Tamil Nadu, India and also, its representatives INDIAN BANK, FGMO, Hazratganj , Lucknow.
- vii. **“Architect”** shall mean M/s. **SANDEEP GOVALKAR DESIGN ASSOCIATES**, Mumbai appointed as Architect by Bank for this project
- viii. **“IEM”** shall mean Shri. M J Joseph (Mohan.joseph@gmail.com) appointed as Independent External Monitor by Client.
- ix. **“Contract Agreement”** shall mean the agreement to be signed between the Successful Tenderer and the Client.
- x. **“Contract Price”** shall mean the financial bid of the Successful Tenderer as accepted by the Client.
- xi. **“Date of commencement of work”** shall mean the date of Start as specified i.e. from the first date of handing over of the site or 15th day from the date of issue of Letter of Acceptance (LOA), whichever is later.

- xii. **"Defects Liability Period"/"Maintenance Period"** means the period after completion of the Project during which the Bank or his authorized representative/ Engineer-in-charge of Architect that will notify to the Contractor any defect noticed in the work and the Contractor is liable for rectification of such defects. Proof of dispatch of letter notifying the defect/ intimating the representative of Contractor at site on the last date of Defect liability period will make the Contractor liable for rectify all such defects.
- xiii. **"Letter of Acceptance"** shall mean the letter issued by the Client to the Successful Tenderer inviting him to sign the Contract Agreement.
- xiv. **"Performance Guarantee"** shall mean the amount to be paid by the Successful Tenderer as per relevant clause mentioned elsewhere.
- xv. **"Project / Work"** shall mean "repair & renovation of hostel rooms, related civil works along with necessary infrastructure, external painting, water proofing, electrical works, air-conditioning works, replacement of lift (1 No) in Staff College, Lucknow Campus At Sector No.:485-486-487, Sector 21, Indira Nagar, Lucknow-226016"
- xvi. **"Site"** shall mean the place where the works under the Project are to be carried out and the details of which are provided in this document
- xvii. **"Successful Tenderer"** shall mean the Tenderer declared technically and financially successful for the Project and with whom, the Contract Agreement shall be signed.
- xviii. **"Similar Works"** as defined in eligibility criteria.
- xix. "Scheduled banks" mean "Scheduled commercial Banks"
- xx. **"NIT"** means **Notice Inviting Tender**. The word **"Notice Inviting Tenders"** is synonymous with **"Notice Inviting Bids"**.
- xxi. **"ITB"** means **Instructions to Bidder/s**

"Drawings": The work is to be carried out in accordance with drawings, specifications, the schedule of quantities and any further drawings which may be supplied or any other instruction, which may be given by the Employer during the execution of the work.

All drawings relating to work given to the Tenderer together with a copy of schedule of quantities are to be kept at site and the Employer / Architect/ PMC shall be given access to such drawings or schedule of quantities whenever necessary.

In case any detailed Drawings are necessary Tenderer shall prepare such detailed drawings and or dimensional sketches there for and have it confirmed by the Employer/ Architect/PMC as case may be prior to taking up such work. The Tenderer shall ask in writing for any clarifications.

- xxii. **"The Works** shall mean the work or works to be executed or done under this contract.
- xxiii. **"Act of Insolvency"** shall mean any act as such as defined by the Presidency Towns Insolvency Act or in Provincial Insolvency Act or any amending statutes.
- xxiv. **"The Schedule of Quantities"** shall mean the schedule of quantities as specified and forming part of this contract.
- xxv. **"Priced Schedule of Quantities"** shall mean the schedule of quantities duly priced with the accepted quoted rates of the Tenderer.

2. SCOPE OF WORK

The work consists of Repair & Renovation of All Hostel Rooms, Related Civil Works Along With Necessary Infrastructure, External Painting, Replacement of 1 Lift, Water proofing, Electrical Works, Air Conditioning Works in Staff College Lucknow Campus., in accordance with the drawings and or Schedule of Quantities. It includes furnishing all materials, labour, tools and equipment and management necessary for and incidental to the construction and completion of the work.

- Repairing and revamping classrooms, hostel rooms, and toilets.
- Installation of Air-conditioning for Rooms, Cabins, Class room etc
- Laying of flooring & Stone Gladding
- Public Address systems, CCTV, FAS and DATA /Tel etc
- External and internal repairing, painting, and waterproofing works
- Replacement of existing Windows, Shutters and doors
- Lift installation
- Electrical Panels, Wiring, Fittings etc
- Providing Fixture, furniture, and allied works
- Joineries
- Fire Fighting works
- Other Infra structure works
- Builder works
- Miscellaneous works

All work during its progress and upon completion, shall conform to the lines, elevations and grades as shown on the drawings furnished by the Employer/Architect. Should any detail essential for efficient completion of the work be omitted from the drawings and specification it shall be the responsibility of the contractor to inform the Employer/Architect and to furnish and install such detail with Employers/Architect concurrence, so that upon completion of the proposed work the same will be acceptable and ready for use. Employer /Architect may in their absolute discretion issue further drawings and/or written instructions, details, directions and explanations, which are, hereafter collectively referred to as The Employer's/Architect's instructions in regard to:

- a) The variation or modification of the design quality or quantity of works or the addition or omission or substitution of any work.
- b) Any discrepancy in the drawings or between the schedule of quantities and/or drawings and/or specification.

- c) The removal from the site of any defective material brought thereon by the contractor and the substitution of any other material thereof.
- d) The demolition removal and/or re-execution of any work executed by the contractors.
- e) The dismissal from the work of any persons employed thereupon.
- f) The opening up for inspection of any work covered up.
- g) The rectification and making good of any defects under clauses hereinafter mentioned and those arising during the maintenance period (retention period)

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

The contractor shall set up a field laboratory with necessary equipment for day today testing of materials like grading of course and fine aggregates, silt content and bulk age of sand etc.

Regarding all factory made products for which ISI marked products are available, only products bearing ISI marking shall be used in the work.

3. **Tenderer shall visit the site:**

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

4. **Tenders**

The entire set of tender paper issued to the Tenderer should be submitted fully priced and also signed on the every page. Signature will indicate the acceptance of the tender papers by the Tenderer. The schedule of quantities shall be filled in as follows:

- a) The "Rate" column to be legibly filled in ink both English figures and English words.
- b) Amount column to be filled in for each item and the amount for each sub head as detailed in the " Schedule of Quantities.
- c) All corrections are to be initialed.
- d) The "Rate Column" for alternative items shall be filled up.
- e) The " Amount" column for alternative items of which the quantities are not mentioned shall not be filled up.
- f) In case of any errors/omissions in the quoted rates, the rates given in the tender marked "Original" shall be taken as correct rates.

No modifications, writings or corrections can be made in the tender papers by the Tenderer, but may at his option offer his comments or modifications in a separate sheet of paper attached to the original tender papers.

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

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

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

All items of work described in the schedule of quantities are to be deemed and paid as complete works in all respects and details including preparatory and finishing works involved, directly, related to and reasonably detectable from the drawings, specifications and schedule of quantities and no further extra charges will be allowed in this connection. In the case of lump-sum charges in the tender in respect of any item of works, the payment of such items of work will be made for the actual work done on the basis of lump-sum charges as will be assessed to be payable by the Employer/ Architect.

The employer has power to add to, omit from any work as shown in drawings or described in specifications or included in schedule of quantities and intimate the same in writing but no addition, omission or variation shall be made by the Tenderer without authorization from the Employer. No variation shall vitiate the contract. Please also refer to pare 9 hereinafter.

The Tenderer shall note that his tender shall remain open for consideration for a period as specified in General rules and Instructions under Item No 10 from the date of opening of the price - bid of the tender.

5. Agreement

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

6. Permits and Licenses

Permits and licenses for release of materials which are under Government control will be arranged by the Tenderer. The employer will render necessary assistance, sign any forms or applications that may be necessary. The Employer/ Architect / PMC shall be indemnified against all Government or

legal actions for theft or misuse of cement, M.S. rods, etc. and any such controlled materials in the custody of the Tenderer. It may be clearly understood that no compensation or additional charges can be claimed by the Tenderer for non-availability of such materials in due time on this account or according to his own requirements.

7. Government and Local Rules

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

8. Taxes and Duties

The Tenderer must include in their tender prices quoted for all duties royalties, cess and sales tax, Good & Service Tax, VAT, LBT or any other taxes or local charges if applicable. No extra claim on this account will in any case be entertained. The Tenderer shall keep necessary books of accounts & other documents for the purpose of this condition as may be necessary and shall allow inspection of the same by duly authorized representative of the employer and or the Engineer-in-charge and further shall furnish such other information / document as the employer may require from time to time.

9. Quantity of Work to be executed

The quantities shown in the schedule of quantities are intended to cover the entire structure as indicated but the Employer reserves the right to execute only apart or the whole or any excess thereof without assigning any reason therefore.

10. Other Persons Engaged by the Employer

The employer reserves the right to execute any part of the work included in this contract or any work which is not included in this contract by other Agency or persons and Tenderer shall allow all reasonable facilities and use of his scaffolding for the execution of such work. The main Tenderer shall extend all cooperation in this regard.

11. Earnest Money & Retention amount:

The Tenderer will have to deposit an amount of 2% of tender amount in the form of **Bankers Draft** or **Bank Guarantee** from scheduled commercial bank in India drawn in favour of Indian Bank, payable at Lucknow at the time of submission of tender as an Earnest Money. The employer is not liable to pay any interest on the Earnest Money. The Earnest Money of the unsuccessful Tenderers will be refunded without any interest soon after the acceptance of the selected bidder after award of work or after the expiry of the validity period of the tender.

The successful Tenderer to whom the contract is awarded will have to deposit as initial security deposit a sum to 2% of the value of the accepted tender including the Earnest Money. The initial Security Deposit will have to be made within 14 days from the date of acceptance of tender, failing which the Employer at his discretion may revoke the letter of acceptance and forfeit the Earnest Money Deposit furnished along with the tender.

Apart from the Initial Security Deposit made as above, retention money shall be deducted from progressive running bills @ 8% of the gross value of each running bill until the Total Security Deposit, i.e., the initial Security Deposit plus the retention money equals 10 % of the project cost. 50% of the total security deposit shall be released on successful completion of the works and after obtaining Virtual completion certificate from the Architect and No Claim certificate by the bidder to the employer.

The Balance retention amount will be refunded to the Tenderer 30 (Thirty) days after the end of defects liability period as mentioned in point no. 15 of this special condition of contract provided he has satisfactorily carried out all the work and attended to all defects in accordance with the conditions of the contract. No interest is allowed on retention money. A part of the Security Deposit if and as decided by a constituent authority of Bank, can also be furnished in the form of a bank guarantee on a bank other than that of the constituent Indian bank.

12. Tenderer to provide everything necessary

The Tenderer shall provide everything necessary for the proper execution of the work according to the intent and meaning of the drawings, schedule of quantities and specifications taken together whether the same may or may not be particularly shown or described therein provided that the same can reasonably be inferred there from and if the Tenderer finds any discrepancies therein he shall immediately and in writing, refer the same of the Employer/ Architect / PMC whose decision shall be final and binding.

The Tenderer shall provide himself for ground and fresh water for carrying out of works at his own cost. The Employer shall on no account be responsible for the expenses incurred by the Tenderer for hired ground or fresh water obtained from elsewhere.

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

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

The Tenderer shall also provide such temporary road on the site as may be necessary for the proper performance of the contract and for his own convenience but not otherwise. Upon completion, such roads shall be broken up and leveled where so required by the drawings unless the Employer shall otherwise direct. The Tenderer shall at all times give access to workers employed by the Employer or any men employed on the buildings and to provide such parties with proper sufficient and if required, special scaffolding, hoists and ladders and provide them with water and lighting and leave or make any holes, grooves etc., in any work, where directed by the employer as may be required to enable such workmen to lay or fix pipes, electrical wiring, special fittings etc. The quoted rates of the Tenderers shall accordingly include all these above mentioned contingent works.

13. Time of Completion, Extension / of Time & Progress Chart

- i. Time of Completion: The entire work is to be completed in all respects within the stipulated period 12 months' time and the work shall be deemed to be commenced within 14 days from the date of acceptance letter or date of handing over the site whichever is later. Time is the essence of the contract and shall be strictly observed by the Tenderer. The work shall not be considered as complete until the Employer/ Architect have certified in writing that this has been completed and the Defects Liability Period shall commence from the date of such certificate.
- ii. Extension of Time: If in the opinion of the Employer/ Architect/ PMC the works be delayed (a) by reason of any exceptionally inclement weather, or (b) by reason of instructions from the Employer in consequence of proceedings taken or threatened by or disputes, with adjoining or neighboring owners or (c) by the works, or delay, of other Tenderers or tradesmen engaged or nominated by the Employer and not referred to in the specification or (d) by reason of authorized extra and additions or (e) by reason of any combination of workmen or strikes or lock-out affecting any of the building trades or (f) from other causes which the Employer may consider being beyond the control of the Tenderer, the Employer at the completion of the time allowed for the contract shall make fair and reasonable extension of time for completion in respect therefore. In the event of the Employer failing to give possession of the site upon the day specified above the time of completion shall be extended suitably.
- iii. In case of such strikes or lock-outs, as are referred to above, the Tenderer shall, immediately give the Employer, written notice thereof. Nevertheless, the Tenderer shall use his best endeavors all that to prevent delay, and shall do all that may be reasonably required, to the satisfaction of the Employer to proceed with the works and on his doing so that it will be ground of consideration by the Employer for an extension of time as

above provided. The decision of the Employer as to the period to be allowed for an extension of time for completion here under (which decision shall be final and binding on the Tenderer) shall be promulgated at the conclusion of such strike or lock -out and the Employer shall then, in the event of an extension being granted, determine and declare the final completion date. The provision in Special Instruction clause 5, with respect to payment of liquidated damages shall, in such case, be read and construed as if the extended date fixed by the Employer were substituted for and the damage shall be deducted accordingly.

iv. Progress of Work: During the period of construction the Tenderer shall maintain proportionate progress on the basis of a Programmed Chart submitted by the Tenderer immediately before commencement of work and agreed to by the Employer / Architect. Tenderer should also include planning for procurement of scarce material well in advance and reflect the same in the Programmed Chart so that there is no delay in completion of the project.

14. Tools, Storage of Materials, Protective Works and Site Office Requirements

The Tenderer shall maintain a site office with site engineer to receive instruction notices or communications etc. from Employer/Architect.

All drawings maintained on the site are to be carefully mounted on boards of appropriate size and covered with a coat of approved varnish. They are to be protected from ravages of termites, ants, and other insects as well theft.

The Tenderer shall provide at his own cost all artificial light required for the work and to enable other Tenderers and sub-Tenderers to complete the work within the specified time. The Tenderer shall use the toilets identified by the Indian Bank for use of their workmen and keep the same in a clean and sanitary condition to the satisfaction of the Indian Bank / Public Health Authorities and shall cause such latrines and soil to be cleared away whenever necessary and shall make good all the works disturbed by these conveniences.

Every precaution shall be taken by the Tenderer to prevent the breeding of mosquitoes on the site during the construction works, and all receptacles; cisterns, water tanks etc. Used for the storage of water must be suitably protected against breeding of mosquitoes. The Tenderer shall indemnify the Employer/Architect against any breach of rules in respect of anti- malarial measures.

The Tenderer shall not fix or place any placards or advertisement of any description or permit the same to be fixed or placed in or upon any boarding, gantry, building structure other than those approved by the Employer .

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

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

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

Storage of materials: The Tenderer shall provide and maintain proper sheds for the proper storage and adequate protection of the materials etc. and other work that may be executed on the site including the tools and materials of sub- Tenderer and remove same on completion. Cement should be stored one feet above the ground level and have raised floor.

Tools: The theodolite levels, steel and metallic tapes and all other surveying instruments found necessary on the works shall be provided by the Tenderer for the due performance of this contract as instructed by the Site Engineer. All measuring tapes shall be of steel and suitable scaffolding and ladders that may be required for safely taking measurement shall be supplied by the Tenderer.

The masteries and the supervisors on the works shall carry with them always a one meter or two meter steel tape, a measuring tape of 3,5,30 meters, a spirit level, a plumb bob and a square and shall check the work to see that the work is being done according to the drawing and specifications. The Site Engineer will use any or all measuring instruments or tools belonging to the Tenderer as he chooses for checking the works executed or being executed on the contract. The Tenderer should cover in his rates for making provisions for all reasonable facilities for the use of his scaffolding, tools and plant etc. by sub-Tenderer for their work.

15. **Notice and Patents of Appropriate Authority and Owners**

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

The Tenderer shall arrange to give all notices required for by the said Acts, Regulations or Bye-laws to be given to any authority and to pay to such authority or to any public officer all fees that may be properly chargeable in respect of the work and lodge the receipts with the Employer.

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

16. **Clearing Site and Setting out Works**

The site shown on the plan shall be cleared of all obstructions, loose stone, and materials rubbish of all kinds. All holes or hollows whether originally existing or produced by removal or loose stone or materials shall be carefully filled up with earth well rammed and leveled off as directed at his own cost. The Tenderer shall set out the works and shall be responsible for the true and perfect setting out of the work and for the correctness of the

positions, levels, dimensions and alignment of all parts thereof. If at any time, any error shall appear during the progress of any part of the work, the Tenderer shall at his own expenses rectify such error, if called upon to the satisfaction of the Employer. The Tenderer shall further set out the works to the alternative positions at the site until one is finally approved and the rates quoted in his tender should include for this and not extra on this account will be entertained.

17. Tenderer Immediately to Remove All Offensive Matters

The Tenderer shall keep the foundations and works free from water and shall provide and maintain at his own expenses electrically or other power driven pumps and other plant to the satisfaction of the Employer for the purpose, until the building is handed over to the Employer. The Tenderer shall arrange for the disposal of the water so accumulated to the satisfaction of the Employer and local authority and no claims will be entertained afterwards if he does not include in his rates for the purpose.

18. Access

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

19. Materials, Workmanship, Samples, Testing of Materials:

All the works specified and provided for in the specifications or which may be required to be done in order to perform and complete any part thereof shall be executed in the best and most workmanlike manner with materials of the best and approved quality of the respective kinds in accordance with the particulars contained in and implied by the specifications and as represented by the drawings or according to such other additional particulars, and instructions as may from time to time be given by the Employer/ Architect during the execution of the work, and to his entire satisfaction. If required by the Employer/ Architect, the Tenderer shall have to carry out tests on materials and workmanship in approved materials testing laboratories or as prescribed by the Employer/ Architect at his own cost to prove that the materials etc. under test confirm to the relevant I.S. Standards or as specified in the specifications. The necessary charges for preparation of mould (in case of concrete cube) transporting, testing etc., shall have to be borne by the Tenderer. No extra payment on this account should in any case be entertained.

All works to be carried out generally as per BIS Specifications.

Branded items, i.e., BIS compliant items specified in the tender shall not be tested separately. However, the other items if approved by Indian Bank are subjected to testing as per tender specifications.

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

During the inclement weather the Tenderer shall suspend concreting and plastering for such time as the Employer/ Architect may direct or as situation/weather condition demands and shall protect from injury all work when in course of execution. Any damage (during constructions) to any part of the work for any reasons due to rain, storm, or neglect of Tenderer shall be rectified by the Tenderer in an approved manner at no extra cost.

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

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

The contractor shall prepare for approval of Architect the Co-ordinate services drawings for pre-planned openings so that the alterations are reduced to the minimum.

20. Removal of Improper Work

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

21. Site Engineer/Project Management Consultant:

The term "Site Engineer/PMC" shall mean the person/agencies appointed and paid by the Employer to superintend the work. The Tenderer shall afford the Site Engineer/PMC every facility and assistance for examining the works and materials and for checking and measuring work and materials. The Site Engineer/PMC shall have no power to revoke, alter, enlarge or relax any requirements of the Tenderer or to sanction any day work, additions, alterations, deviations or omissions or any extra work whatever, except in so far as such authority may be specially conferred by a written order of the Employer

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

22. Tenderer's Employees

The Tenderer shall employ technically qualified and competent supervisors for the work who shall be available (by turn) throughout the working hours to receive and comply with instructions of the Employer/ Architect. The Tenderer shall engage at least one experienced Engineer as site-in-charge for execution of the work. The Tenderer shall employ in connection with the work persons having the appropriate skill or ability to perform their job efficiently. The Tenderer shall employ local labourers on the work as far as possible.

No labourer below the age of sixteen years and who is not an Indian National shall be employed on the work.

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

The Tenderer shall comply with the provisions of all labour legislation including the requirements of:

- a) The Payment of Wages Act 1936
- b) Employer's Liability Act 1938
- c) Workmen's Compensation Act Contract Labour (Regulation & Abolition) Act, 1970 and Central Rules 1971.
- e) Apprentices Act 1961
- f) Minimum Wages Act 1948
- g) Any other Act or enactment relating thereto and rules framed there under from time to time.

The Tenderer shall keep the Employer saved harmless and indemnified against claims if any of the workmen and all costs and expenses as may be incurred by the Employer in connection with any claim that may be made by any workmen.

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

The Tenderer shall arrange to make provisions and provide first-aid treatment to the laborers engaged on the works. He shall within 24 hours of the occurrence of any accident at or about the site or in connection with execution of the works, report such accident to the Employer and also to the Competent Authority where such report is required by law Compliance of labour regulations:

23. Dismissal of Workmen:

The Tenderer shall on the request of the Employer/Architect immediately withdraw / remove from works any person employed thereon by him, who may in the opinion of the Employer/Architect be unsuitable or incompetent or who may misconduct himself. Such withdrawal / remove shall not be the basis of any claim for compensation or damages against the Employer or any of their officer or employee.

24. Assignment

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

25. Damage to Persons and Property Insurance Etc.:

The Tenderer shall be responsible for all injury to the work or workmen to persons, animals or things and for all damages to the structural and/or decorative part of property which may arise from the operations or neglect of himself or of any sub-Tenderer or of any of his or a sub-Tenderer's employees, whether such injury or damage arise from carelessness, accident or any other cause whatsoever in any way connected with the carrying out of this contract.

The clause shall be held to include inter-alia, any damage to buildings whether immediately adjacent or otherwise, and any damage to roads, streets, foot paths or ways as well as damages caused to the buildings and the works forming the subject of this contract by rain, wind or other inclemency of the weather.

The Tenderer shall indemnify the Employer and hold harmless in respect of all and any expenses arising from any such injury or damages to persons or property as aforesaid and also in respect of any claim made in respect of injury or damage under any acts of compensation or damage consequent upon such claim.

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

The Tenderer shall effect the insurance necessary and indemnify the Employer entirely from all responsibility in this respect. The insurance must be placed with a company approved by the Employer and must be effected jointly in the name of the Tenderer and the Employer and the policy lodged with the latter. The scope of insurance is to include damage or loss to the work and workman due to carelessness accident, including fire, earthquake and floods etc., damage or loss to the contract itself till this is made over in a complete state. Insurance is compulsory and must be affected from the very initial stage. The Tenderer shall also be responsible for anything which may be excluded from damage to any property arising out of incidents, negligence or defective carrying out of this contract.

The Employer shall be at liberty and is hereby empowered to deduct the amount of any damages, compensations, costs, charges and expenses arising or accruing from or in respect of any such claim or damages from any sums due or to become due to the Tenderer.

26. Insurance:

The Tenderer shall arrange to take Tenderers all risk insurance policy including third party liability, covering the entire period of contract till virtual completion of the contract (including extended period if any) for the entire scope of works for a risk cover not less than the contract value. The third party insurance shall be for a sum of Rs.2.00 Lakh per accident.

Unless otherwise instructed the Tenderer shall ensure the works and keep them insured until the virtual completion of the contract against loss or damage by fire and /or earthquake, flood. The insurance must be placed with a company approved by the Employer, in the joint names of the Employer and the Tenderer for such amount and for any further sum if called to do so by the employer, the premium of such further sum being allowed to the Tenderer as an authorized extra.

The Tenderer shall as soon as the claim under the policy is settled or the work reinstated by the Insurance Company should they elect to do so, proceed with due diligence with the completion of the works in the same manner as though the fire has not occurred and in all respects under the conditions of the contract. The Tenderer in case of rebinding or reinstatement after fire shall be entitled to extension of time for completion as the Employer may deem fit.

27. Accounts, Receipts & Vouchers

The Tenderer shall, upon the request of the Employer furnish them with all the invoices, accounts, receipts and other vouchers that they may require in connection with the works under this contract. If the Tenderer shall use materials less than what he is required under the contract, the value of the difference in the quantity of the materials he was required to use and that he actually used shall be deducted from his dues. The decision of the Employer shall be final and binding on the Tenderer as to the amount of materials the Tenderer is required to use for any work under this contract.

28. Measurement

Before taking any measurement of any work the Site Engineer or a subordinate deputed by Architect/Bank shall give reasonable notice to the Tenderer. If the Tenderer fails to attend at the measurements after such notice or fails to countersign or to record the difference within a week from the date of measurement in the manner required by the Site Engineer, then in any such event the measurements taken by the Site Engineer or by the subordinate deputed by him as the case may be is final and binding on the Tenderer and the Tenderer shall have no right to dispute the same.

29. Payments

All bills shall be prepared by the Tenderer in the form prescribed by the Employer/Architect. Normally one interim bill shall be prepared each month subject to minimum value for interim certificate as stated in these documents. The bills in proper forms must be duly accompanied by detailed measurements in support of the quantities of work done and must show deductions for all previous payments, retention money, etc.

The Employer/ Architect shall issue a certificate after due scrutiny of the Tenderers bill stating the amount due to the Tenderer from the Employer and the Tenderer shall be entitled to payment thereof, within the period of honoring certificates named in these documents. In case of delay due to some reasons in the processing of such bills for payment, an advance of 70% of the billed Amount may be paid on the request of the Tenderer for the smooth progress of the work. The amount stated in an interim certificate shall be the total value of work properly executed and 75% of invoiced value of material brought to site for permanent incorporation into the work up to the date of the bill less the amount to be retained by the Employer as retention money vide clause 11 of the general conditions of contract, less TDS, less installments previously paid under these conditions, provided that such certificate shall only include the value of said material and goods as and from such time as they are reasonably, properly and not prematurely brought to or placed adjacent to the work and then only if adequately protected against weather or other causalities.

The Employer will deduct retention money as per tender conditions. The refund of retention money will be made as specified in the said clause.

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

All the interim payments shall be regarded as payments by way of advance against the final payment only and not as payments for work actually, done and completed, and shall not preclude the Requiring of bad, unsound, and- imperfect or unskilled work to be removed and taken away and reconstructed, or re-erected or be considered as an admission of the due performance of the contract, or any part thereof in any respect or the accruing of any claim, nor shall, it conclude, determine or affect in anyway the power of the Employer under these conditions or any of them as to the final settlement and adjustment of the accounts or otherwise or in any other way vary or affect the contract. The final bill shall be submitted by the Tenderer within one month of the date fixed for completion of the work or of the date of certificate of completion furnished by the Architect and payment shall be made within 3 Months from the date of receipt of certificate from the Architect. Payment will be made 75% against supply of materials & 25 % against erection and commissioning, less statutory deductions.

30 Final Payment:

The final bill shall be accompanied by a certificate of completion from the Consultants & Architect. Payments of final bill shall be made after deduction of Retention Money as specified in clause 11 of the general conditions of contract. which sum shall be refunded after the completion of the Defects Liability Period after receiving the Employer's/ Architect' certificate that the Tenderer has rectified all defects to the satisfaction of the Employer/ Architect. The acceptance of payment of the final bill by the Tenderer would indicate that he will have no further claim in respect of the work executed.

The contractor has to submit 2 copies of as built drawings of A2 or A1 size and CD duly certified by the Architect to the Bank along with final bill documents. Along with Every bill the contractor has to submit the photographs of the work executed.

**FORMAT FOR RUNNING BILL
 ON LETTER HEAD OF CONTRACTOR**

Running Bill No.

Tender Amount		Rs...../-
Value of work done		Rs...../-
Less rebate	(-)	Rs...../-
Net Value of work done		Rs...../-
Extra variation items after settlement @100%		Rs...../-
Extra variation items without Settlement @75%		Rs...../-
Total		Rs...../-
Total payable		Rs...../-

Deductions

Retention money		Rs..... /-
Recovery of advance if any		Rs..... /-
3. Income-tax		Rs...../-
4. Total bill paid till last bill		Rs...../-
Total deductions		Rs...../-
Net payable		Rs...../-
Amount certified for payment		Rs...../-

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

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

Sr. No.	Items Description	Unit	Rate	Qty. as per measurement	Tender Amount Rs.
1	2	3	4	5	6

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

Note:

- If part is allowed for any item, it should be indicated with reasons for the allowing such a rate
- If adhoc payment is made, it should be mentioned specially.
- Consumption of Cement/Steel statement to be submitted along with each R.A. Bills.

31. Variation/Deviation

The price of all such additional items/non-Tenderer items will be worked out on the basis of rates quoted for similar items in the contract wherever existing or on engineering rate analysis based on prevalent fair price of labour, material and other components as required or as asked by the Architect.

32. Substitution

Should the Tenderer desire to substitute any materials and workmanship, he/they must obtain the approval of the Employer/ Architect in writing for any such substitution well in advance. Materials designated in this specification indefinitely by such term as "Equal" or "Other approved" etc. specific approval of the Employer/ Architect has to be obtained in writing.

33. Preparation of Building Works for Occupation and Use on Completion

The whole of the work will be thoroughly inspected by the Tenderer and deficiencies and defects put right. On completion of such inspection the Tenderer shall inform the Employer that he has completed the work and it is ready for inspection. On completion the Tenderer shall clean all windows and doors including the cleaning and oiling if necessary, of all hardware, inside and outside, all floors, stair-cases, and every part of the building. He will leave the entire building neat and clean and ready for immediate occupation and to the satisfaction of the Indian bank.

34. Clearing Site on Completion

On completion of the works the Tenderer shall clear away and remove from the site all constructional plant, surplus materials, rubbish and temporary works of every kind and leave the whole of the site and the works clean and in a workman like condition to the satisfaction of the Employer/ Architect.

35. Defects after Completion

The Tenderer shall make good at his own cost and to the satisfaction of the Employer all defects, shrinkage, settlements or other faults which may appear within 12 months after completion of the work. In default the Employer may employ and pay other persons to amend and make good such damages, losses and expenses consequent thereon or incidental thereto shall be made good and borne by the Tenderer and such damages, loss and expenses shall be recoverable from him by the Employer or may be deducted by the employer, in lieu of such amending and making good by the Tenderer, deduct from any money due to the Tenderer a sum equivalent to the cost of amending such work and in the event of the amount retained being insufficient, recover that balance from the Tenderer from the amount retained under General Rules and instruction Special Instruction Clause 5 together with any expenses the Employer may have incurred in connection therewith.

36. Concealed Work

The Tenderer shall give due notice to the Employer/ Architect whenever any work is to be buried in floor / earth, concrete, ceilings or in the bodies of walls or otherwise becoming inaccessible later on, in order that the work may be inspected and correct dimensions taken before such burial, in default whereof the same shall, at the opinion of the Employer/ Architect be either opened up for measurement at the Tenderer's expense or no payment may be made for such materials. Should any dispute or differences arise after the execution of any work as to measurements etc., or other matters which cannot be conveniently tested or checked, the notes of the Employer/ Architect shall be accepted as correct and binding on the Tenderer.

37. Escalation

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

38. Idle Labour

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

39. Suspension

If the Tenderer except on account of any legal restraint upon the Employer preventing the continuance of the work or in the opinion of the Employer shall neglect or fail to proceed with due diligence in the performance of his part of the contract or if he shall more than once make default, the Employer shall have the power to give notice in writing to the Tenderer requiring the work to be proceeded within a reasonable manner and with reasonable dispatch, such notice purport to be a notice under this clause. After such notice shall have been given the Tenderer shall not be at liberty to remove from the site of the works or from any ground contiguous thereto any plant or materials to subsist from the date of such notice being given until the notice shall have been complied with. If the Tenderer fails to start the work within seven days after such notice has been given to proceed with the works as therein prescribed, the Employer may proceed as provided in clause 40 (Termination of Contract by Employer).

40. Termination of Contract by Employer

If the Tenderer being a company go into liquidation whether voluntary or compulsory or being a firm shall be dissolved or being an individual shall be adjudicated insolvent or shall make an assignment or a composition for the benefit of the greater Part, in number of amount of his creditors or shall enter into a Deed or arrangement with his creditors, or if the Official Assignee in insolvency, or the Receiver of the Tenderer in insolvency, shall repudiate the contract, or if a Receiver of the Tenderer's firm appointed by the court shall be unable, within fourteen days after notice to him requiring him to do so, to show to the reasonable satisfaction of the employer that he is able to carry out and fulfill the contract, and if so, required by the employer to give reasonable security therefore. or if the Tenderer shall suffer execution to be issued, or shall suffer any payment under this contract to be attached by or on behalf of and of the creditors of the Tenderer, or shall assign, charge or encumber this contract or any payments due or which may become due to the

Tenderer, there under, or shall neglect or fail to observe and perform all or any of the acts matters of things by this contract, to be observed and performed by the Tenderer within three clear days after the notice shall have been given to the Tenderer in manner hereinafter mentioned requiring the Tenderer to observe or perform the same or shall use improper materials or workmanship in carrying on the works, or shall in the opinion of the employer not exercise such due diligence and make such due progress as would enable the work to be completed within due time agreed upon, and shall fail to proceed to the satisfaction of the employer after three clear days' notice requiring the Tenderer so to do shall have been given to the Tenderer as hereinafter mentioned, or shall abandon the contract, then and in any of the said cases, the Indian Bank may notwithstanding previous waiver determine the contract by a notice in writing to the effect as hereinafter mentioned, but without thereby effecting the powers of the employer of the obligations and liabilities of the Tenderer the whole on which shall continue in force as fully as if the Contract, had not been so determined and as if the works subsequently executed had been executed by or on behalf of the Tenderer (without thereby creating any trust in favour of the Tenderer) further the employer or his agent, or servants, may enter upon and take possession of the work and all plants, tools, scaffolding, sheds, machinery, steam and other power, utensils and materials lying upon premises or the adjoining lands or roads and sell the same as his own property or may employ the same by means of his own servants and workmen in carrying on and completing the works or by employing any other Tenderers or other persons or person to complete the works, and the Tenderer shall not in any way interrupt or do any act, matter of thing to prevent or hinder such other Tenderers or other persons or person employed from completing and finishing or using the materials and plants for the works when the works shall be completed, or as soon thereafter as conveniently may be, the employer shall give notice in writing to the Tenderer to remove his surplus materials and plants and should the Tenderer fail to do so within a period of 14 days after receipt by him the employer may sell the same by Public Auction and shall give credit to the Tenderer for the amount so realized. Any expenses or losses incurred by the employer in get the works carried out by other Tenderers shall be adjusted against the amount payable to the Tenderer by way of selling his tools and plants or due on account of work carried out by the Tenderer prior to engaging other Tenderers or against the Security Deposit.

41. Arbitration

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 of this contract or the rights touching or concerning the works or the execution of maintenance thereof of this contract or the construction remaining operation or effect thereof or to the rights or liabilities of the parties or arising out of or in relation thereto whether during or after determination foreclosure or branch of the contract (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 to the other of them and to the Employer hereinafter mentioned be referred for adjudication to a sole Arbitrator to be appointed as hereinafter provided.

For the purpose of appointing the sole Arbitrator referred to above, the Employer will send within thirty days of receipt of the notice, to the Tenderer a panel of three names of persons who shall be presently unconnected with the organization for which the work is executed. The Tenderer shall on receipt of the names as aforesaid, select anyone of the person's name to be appointed as a sole Arbitrator and communicate his name to the Employer within thirty days of receipt of the names. The Employer shall there upon without any delay appoint the said person as the Sole Arbitrator. If the Tenderer fails to communicate such selection as provided above within the period specified, the competent Authority shall make the selection and appoint the selected person as the Sole Arbitrator.

If the Employer fails to send to the Tenderer the panel of three names as foresaid within the period specified, the Tenderer shall send to the Employer a panel of three names of persons who shall all be unconnected with either party. The Employer shall on receipt of the named as aforesaid select anyone of the persons names and appoint him as the Sole Arbitrator. If the Employer fails to select the person and appoint him as the Sole Arbitrator within 30 days of receipt of the panel and inform the Tenderer accordingly, the Tenderer shall be entitled to appoint one of the persons from the panel as the Sole Arbitrator and communicate his name to the Employer.

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 Tenderer shall be withheld on account of such proceedings.

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

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

The Arbitrator shall give a separate award in respect of each dispute or difference referred to him. The Arbitrator shall decide each dispute, in accordance with the terms of the contract and give a reasoned award. The venue of arbitration shall be such place as may be fixed by the Arbitrator in his sole discretion.

The fees, if any, of the Arbitrator shall, if required to be paid before the award is made and published, be paid half and half by each of the parties. The cost of the reference and of the award including the fees, if any, of the Arbitrator who may direct to and by whom and in what manner, such costs or any part thereof shall be paid and may fix or settle and amount of costs to be so paid. The award of the Arbitrator shall be final and binding on both the parties.

Subject to aforesaid the provisions of the Arbitration Act 1992 or any statutory modification or re-enactment thereof and the rules made there under, and for the time being in force, shall apply to the arbitration proceeding under this clause.

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

SECTION 7. SAFETY CODE AND MODEL RULES FOR PROTECTION OF HEALTH AND SANITARY ARRANGEMENTS FOR WORKERS

Safety Measures:

Adequate precautions shall be taken to prevent danger from electrical equipment and or otherwise. No materials on any of the sites of work shall be so stacked or placed as to cause danger or inconvenience to any person or the public Personal Safety Equipment.

All necessary personal safety equipment as considered adequate by the Engineer should be kept available for the use of the person employed on the site and maintained in a condition suitable for immediate use, and the Tenderer should take adequate steps to ensure proper use of equipment by those concerned.

- a) Workers employed on mixing asphalt materials, cement and lime mortars shall be provided with protective footwear and protective goggles.
- b) Those engaged in white washing and mixing or stacking of cement bags or any material that is injurious to the eyes shall be provided with protective goggles.
- c) Those engaged in welding works shall be provided with welder's protective eyesight lids.
- d) The Tenderer shall not employ men and women below the age of 18 years on the work of painting with products containing lead or any toxic material in any form. Wherever men above the age of 18 are employed on the work of following precautions should be taken:
 - e) No paint containing lead or lead products shall be used except in the form of pastier or ready-made paint. Paints like vinyl and epoxies having toxic fumes should be applied after following all precautions laid down by manufacturers.
 - f) Suitable face masks should be supplied for use by the workers when paint is applied in the form of spray or a surface having lead paint dry rubbed and scrapped.
 - g) Overalls shall be supplied by the Tenderer to the workers and adequate facilities shall be provided to enable the working painters to wash during the cessation of work.
 - h) When the work is done near any public place where there is risk of drowning all necessary equipment should be provided and kept ready for use and all necessary steps take for prompt rescue of any person in danger and adequate provision should be made for prompt first aid treatment of all injuries likely to be sustained during the course of the work.

First Aid

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

Drinking Water

In every workplace, these shall be provided and maintained by the contractor to labour, fit for drinking.

- a) The existing toilets (selected) will have to be maintained by the contractor at his own cost.
- b) The toilets shall have to be kept clean at all times during the period of contract till handing over.

SECTION 8 : INTEGRITY PACT

To

.....
(Designated authority of CLIENT)

NAME OF WORK:

Ref:

Dear Sir,

I/We acknowledge that the CLIENT is committed to follow the principles thereof as enumerated in the Integrity Agreement enclosed with the tender/bid document.

I/We agree that the Notice Inviting Tender (NIT) is an invitation to offer made on the condition that I/We will sign the enclosed integrity Agreement, which is an integral part of tender documents, failing which I/We will stand disqualified from the tendering process. I/We acknowledge that the making of the bid shall be regarded as an unconditional and absolute acceptance of this condition of the NIT.

I/We confirm acceptance and compliance with the Integrity Agreement in letter and spirit and further agree that execution of the said Integrity Agreement shall be separate and distinct from the main contract, which will come into existence when tender/bid is finally accepted by the CLIENT. I/We acknowledge and accept the duration of the Integrity Agreement, which shall be in the line with Integrity Agreement.

I/We acknowledge that in the event of my/our failure to sign and accept the Integrity Agreement, while submitting the tender/bid, the CLIENT shall have unqualified, absolute and unfettered right to disqualify the tenderer/bidder and reject the tender/bid in accordance with terms and conditions of the tender/bid.

Yours faithfully

(Duly authorized signatory of the Bidder)

PRE-CONTRACT INTEGRITY PACT

To be signed by the bidder and same signatory competent / authorized to sign the relevant contract on behalf of

INTEGRITY AGREEMENT

INTEGRITY PACT Between Indian Bank hereinafter referred to as "The Bank" And hereinafter referred to as "The Tenderer"

Preamble

The Bank intends to award, under laid down organizational procedures, contract/s for carrying out repair & renovation of hostel rooms, related civil works along with necessary infrastructure, Interior, external painting, water proofing, electrical works, air-conditioning works, replacement of lift (1 No) in Staff College, Lucknow Campus At Sector No.:485-486-487, Sector 21, Indira Nagar, Lucknow- 226016

The Bank values full compliance with all relevant laws of the land, rules, regulations, economic use of resources and of fairness /transparency in its relations with its Tenderer.

In order to achieve these goals, the Bank will have an independent External Monitor (IEM), who will monitor the tender process and the execution of the contract for compliance with the principles mentioned above.

Section1– Commitments of the Bank

The Bank commits itself to take all measures necessary to prevent corruption and to observe the following principles:

- a) No employee of the Bank, personally or through family members, will in connection with the tender for, or the execution of a contract, demand, take -a promise for or accept, for self or third person, any material or immaterial benefit which the person is not legally entitled to.
- b) The Bank will, during the tender process treat all Tenderer(s) with equity and reason. The Bank will in particular, before and during the tender process, provide to all Tenderer(s) the same information and will not provide to any Tenderer(s) confidential/ additional information through which the Tenderer(s) could obtain an advantage in relation to the tender processor the contract execution.
- c) The Bank will exclude from the process all known prejudiced persons.

If the Bank obtains information on the conduct of any of its employees which is a criminal offence under the IPC/ PC Act, or it there be a substantive suspicion in this regard, the Bank will inform the Chief Vigilance Officer and in addition can initiate disciplinary actions.

Section 2– Commitment of the Tenderer(s)

The Tenderer(s) commit themselves to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the tender process and during the contract execution.

Tenderer(s) will not, directly or through any other person or firm, offer, promise or give to any of the Bank's employees involved in the tender process or the execution of the contract or to any third person any material or other benefit which he/ she is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the tender process or during the execution of the contract.

The Tenderer(s) will not enter with other Tenderers into any undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process.

The Tenderer(s) will not commit any offence under the relevant IPC/ PC Act: further, the Tenderer (s) will not use improperly, for purpose of competition or personal gain, or pass on to others, any information or documents provided by the Bank as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.

The Tenderer(s) of foreign origin shall disclose the name and address of the Agents/ Representatives in India, if any. Similarly, the Tenderer(s) of Indian Nationality shall furnish the name and address of the foreign principals, if any. Further, as mentioned in the "Guidelines on Indian Agents of Foreign Suppliers" shall be disclosed by the Tenderer(s). Further as mentioned in the Guidelines, all the payments made to the Indian Agent/ Representative have to be in Indian Rupees only .

The Tenderer(s) will, when presenting his bid, disclose any and all payments he has made, is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract.

The Tenderer(s) will not instigate third persons to commit offences outlined above or be an accessory to such offences.

Section 3- Disqualification from tender process and exclusion from future contracts

If the Tenderer(s) before award or during execution has committed a transgression through a violation of Section 2, above or any other form such as to put his reliability or credibility in question, the Bank is entitled to disqualify the Tenderer(s) from the tender process.

Section 4- Compensation for Damages

If the Bank has disqualified the Tenderer(s) from the tender process prior to the award according to Section 3, the Bank is entitled to demand and recover the damages equivalent to Earnest Money Deposit/ Bid Security.

If the Bank has terminated the contract according to Section 3, or if the Bank is entitled to terminate the contract according to Section 3, the Bank shall be entitled to demand and recover from the consultant liquidated damages of the contract value or the amount equivalent to performance Bank Guarantee.

Section 5– Previous Transgression

The Tenderers declares that no previous transgressions occurred in the last three years with any other Company in any country conforming to the anti-corruption approach or with any other Public Sector Enterprises in India that could justify his exclusion from the tender process.

The Tenderer agrees that if he makes incorrect statement on this subject, tenderer is liable to be disqualified from the tender process or the contract, if already awarded, is liable to be terminated for such reason.

The imposition and duration of the execution of the tenderer will be determined by the tenderer based on the severity of transgression.

The Tenderer/ Consultant acknowledges and undertakes to respect and uphold the Bank absolute right to resort to and impose such exclusion.

Apart from the above, the Bank may take action for banning of business dealings/ holiday listing of the Tenderer/ Consultant as deemed fit by the Bank.

If the Tenderer(s) can prove that he has resorted/ recouped the damage caused by him and has implemented a suitable corruption prevention system, the Bank may, at its own discretion, as per laid down organizational procedures, revoke the exclusion prematurely.

Section 6 - Equal treatment of all Tenderers

The Tenderer(s) to demand from all sub-consultants a commitment in conformity with this Integrity Pact, and to submit it to the Bank before contract signing. The Tenderer(s) shall be responsible for any violation(s) of the principles laid down in this agreement/ Pact by any of its Sub- Consultants/ Sub-vendors.

The Bank will enter into agreement with identical conditions as this one with all Tenderers/Consultant.

The Bank will disqualify from the tender process all tenderers who do not sign this Pact or violate its provisions.

Section 7 - Criminal charges against violating Tenderer(s)

If the Bank obtains knowledge of conduct of a Tenderer, or of an employee or a representative or an associate of a Tenderer, which constitutes corruption, or of the Bank has substantive suspicion in this regard, the Bank will inform the same to the Chief Vigilance Officer.

Section 8 - Independent External Monitor/ Monitors

The Bank appoints competent and credible Independent External Monitor for this Pact. The task of the Monitor is to review independently and objectively, whether and to what extent the parties comply with the obligations under this agreement.

The Monitor is not subject to instructions by the representatives of the parties and performs his functions neutrally and independently. It will be obligatory for him to treat the information and documents of the Tenderers / Consultants as confidential. He reports to the Authority designated by the Bank.

The Tenderer(s) accepts that the Monitor has the right to access without restriction to all Project documentations of the Bank including that provided by the Consultant. The Consultant will also grant the Monitor, upon his request and demonstration of a valid interest, unrestricted and unconditional access to his project documentation. The same is applicable to Sub-Consultants. The Monitor is under contractual obligation to treat the information and documents of the Tenderer with confidentiality.

The Bank will provide to the Monitor sufficient information about all meetings among the parties related to the Project provided such meetings could have an impact on the contractual relations between the Bank and the Consultant. The parties offer to the Monitor the option to participate in such meetings.

As soon as the Monitor notices, or believes to notice, a violation of this agreement, he will so inform the Management of the Bank and request the Management to discontinue or take corrective action, or to take other relevant action. The Monitor can in this regard submit nonbinding recommendations. Beyond this, the Monitor has no right to demand from the parties that they act in a specific manner, refrain from action or tolerate action.

The Monitor will submit a written report to the Authority designated by the Bank, within 8 to 10 weeks from the date of reference or intimation to him by the Bank and, should the occasion arise submit proposals for correcting problematic situations.

If the Monitor has reported to Authority designated by the Bank, a substantiated suspicion of an offence under relevant IPC/ PC Act, and the Authority designated by the Bank has not, within the reasonable time taken visible action to proceed against such offence or reported it to the Chief Vigilance Officer, the Monitor may also transmit this information directly to the Central Vigilance Commissioner.

The word 'Monitor' would include both singular and plural.

Section9–Pact Duration

This pact begins when both parties have legally signed it. It expires for the Consultant 12 months after the last payment under the contract, and for all other tenderers 6 months after the contract has been awarded on whomsoever it may be.

If any claim is made/ lodged during this time, the same shall be binding and continue to be valid despite the lapse of this pact as specified above, unless it is discharged/determined by the Bank.

Section10–Examination of Books of Accounts

In case of any allegation of, violation of any provisions of this Integrity Pact or payment of commission, the Bank or its agencies shall be entitled to examine the Books of Accounts of the Tenderer and the Tenderer shall provide necessary information of the relevant financial documents in English and shall extend all possible help for the purpose of such examination.

Section11– Other provisions

This agreement is subject to Indian Law, Place of performance and jurisdiction is the Corporate Office of the Bank, i.e. Chennai.

Changes and supplements as well as termination notices need to be made in writing Side agreements have not been made.

If the Tenderer is a partnership or a Consortium, this agreement, must be signed by all partners or Consortium members. In case of a Company, the Pact must be signed by a representative duly authorized by Board resolution.

Should one or several provisions of this agreement turn out to be invalid, the remaining provisions of this agreement remains valid. In this case, the parties will strive to come to an agreement to their original intentions.

In the event of any contradiction between the Integrity Pact and its Annexure, the Clause in the Integrity Pact will prevail.

Any dispute or difference arising between the parties with regard to the terms of this Agreement/ Pact, any action taken by the Bank in accordance with this Agreement/ Pact or interpretation thereof shall not be subject to arbitration.

The parties hereby sign this Integrity Pact at on

(For & On behalf of the Bank)

(For & On behalf of Tenderer/Contractor)

(Office Seal)
 Place-----
 Date -----

(Office Seal)
 Place-----
 Date -----

Witness 1:
 (Name &Address)

Witness 1:
 (Name &Address)

Witness 2:
 (Name &Address)

Witness 2:
 (Name &Address)

Name of IEM's and Email ID

- Shri. M J Joseph
Mohan.joseph@gmail.com

SECTION 9 : ARTICLES OF AGREEMENT

THIS AGREEMENT is made on this day ofmonth of between "Indian Bank , a body Corporate constituted under the Banking Companies (Acquisition and Transfer of Undertaking) Act, 1970 having its Corporate Office at No.254-260, Avvai Shanmugham Salai, Royapettah, Chennai - 600 014 and having one of its offices known as FGM Office at Lucknow, 1st Floor, New Building, Hazaratganj, Lucknow-226001 (hereinafter referred to as the "Employer") which expression shall include its successor, legal heirs and assignees of the one part.

AND M/s. having its office at

 ...

(hereinafter referred to as the "Contractor") which expression shall include its successor, legal heirs and assignees of the second part.

WHEREAS the employer is desirous of carrying out Repair & Renovation of Hostel Rooms, Related Civil Works Along With Necessary Infrastructure, External Painting, Replacement of 1 Lift, Interior works, Electrical Works, Air Conditioning Works, water proofing works in Staff College Lucknow Campus at Sector No.:485-486-487, Sector 21, Indira Nagar, Lucknow- 226016 as per schedule 1 to this agreement and has caused drawings, Bill of Quantities, Tender Documents specification describing works to be done as prepared by the architect.

AND whereas the Employer has called for tender vide ref. no. dated.....

AND whereas the contractor has submitted the tender ref. no. dated to the Employer on

AND whereas the Employer has issued the work order ref dated..... to the contractor to do the work.

AND whereas the Contractor has agreed to execute the work as per drawings, specifications, conditions of contract and Work Order.

AND whereas the Employer has accepted the Contractor's tender as aforesaid and whereas the tender submitted by the contractor has been accepted for such sum as may be ascertained to be payable in terms of the Bill of Quantities and which sum is estimated to be Rs. (Rupees)
 Hereinafter referred to as the said "Contract Agreement".

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS: -

1) In consideration of the said Contract Sum to be paid at the times and in the manner set forth in the said Conditions the Contractor shall carry out Repair & Renovation of All Hostel Rooms, Related Civil Works Along With Necessary Infrastructure, External Painting, Replacement of 1 Lifts, Electrical Works, Air Conditioning Works in Staff College Lucknow Campus in terms and conditions herein contained and according to the general conditions of the contract, notice inviting tender, special conditions of contract, general scope of work, technical specifications, schedule of rates and instructions to be given by and the supervision of and to the entire satisfaction of the Employer.

2) **Contract Price, Taxes and Payment Terms :**

Total contract price is Rs. which is inclusive of cost of materials, equipment, installation charges and tools and tackles required for execution of the job. Above price is inclusive of all taxes & duties including excise duty, sales tax, works contract tax, income tax, octroi etc. ,excluding GST , in respect of this contract. No claim in this respect will be entertained. Sales tax on works contract & Income tax on payments will be deducted and deposited by Employer in accordance with the sales tax law of the state and the provisions of tax deductions at source under income tax act 1961.

However, interim payment will be made as per the site measurements on Item Rate basis.

3) **Completion Period:**

Time is the essence of the Contract. The work is to be completed in all respects within **12 Months** reckoned from **14th day** from the date of issue of the Work Order or handing over of site whichever is later. If the Contractor fails to complete the job within the agreed time period the Contractor will have to bear liquidated damages as per the relevant clause mentioned in the Tender Documents.

4) **Earnest Money:**

The Contractor has deposited an amount of **Rs.12.76 Lacs (Rupees Twelve Lacs seventy six thousand only)** as earnest money by way of DD in favour of "Indian Bank" payable at LUCKNOW.

5) **Inspection of Site:**

The Contractor has inspected the site before submitting his tender and has satisfied himself as to the nature of the work to be executed on the site. Any difficulties which the Contractor may come across in the course of the work shall in no way relieve the contractor to claim or receive extra payment unless the Employer is of the opinion that such difficulties could not have been foreseen and the Employer consents in writing.

6) **Supply of Material and Labour:**

The Contractor shall arrange all labour, materials, equipment's, tools, tackles and everything necessary for the completion of the work. The Contractor will assume all responsibility for the safety, protection and accounting of all material and equipment and the work during construction. All materials used by the Contractor shall be of the best quality conforming to the required specification mentioned in the tender document and will be subject to the approval of the Employer. All such materials not approved by the Employer shall be removed at once by the Contractor at his own expense. The Contractor shall also at his own expense arrange for carrying out any test of materials which the Employer may from time to time require or if so desired by the employer.

- 7) **Defective Work / Materials:**
If any part of the work done by the Contractor is found defective in workmanship or if bad or inferior materials have been used the Contractor shall at his own risk and cost demolish all such defective work and rebuild the same and / or replace the bad or inferior materials used within a time frame mentioned to the satisfaction of the Employer. The decision of the Employer in this regard shall be final and binding on the Contractor. In case of default of the contractor to remove the defective work and rebuild the same or replace bad or inferior materials as directed by the Employer, the Employer shall be entitled to employ anyone else to carry out the same at risk and cost of the Contractor and recover all expenses incurred in this regard from the contractor.
- 8) **Inspection of Work:**
During progress of the work the Employer shall be entitled at all times to have access to and inspect the work.
- 9) **Supervision:**
The Contractor shall provide one or more competent and technical qualified engineers duly and fully authorized to act on his behalf in all matters relating to the works to be carried out under or any other matter concerning this agreement and who shall at all times be present at the works while any work is in progress as per directions, explanations & instructions of Employer.
- 10) **Compliance with Statutory Regulations & Work Rules:**
The Contractor shall be responsible for complying with the applicable laws / bye laws / Regulations in force from time to time and shall have to bear all statutory liabilities to the workers / personnel engaged for the job. Nothing will be paid extra in this regard. If any amount is paid by the Employer with this regard the same amount shall be deducted from the Contractor's dues. The Contractor shall have to arrange insurance cover for the workers / personnel engaged by him for the job and materials & works supplied/carried out at site/work place. Also to be adhered as per Tender clauses **General Rules And Instruction For The Guidance of Tenderers**
- 11) **Termination of Contract:**
In the event of Contractor failing to keep / adhere to agreed schedule of work, or in the event of the Contractor failing to comply with the provisions of this contract by default and / or negligence and / or suspension of work or in the event of Contractor failing to complete the work within the stipulated period, the Employer may terminate this Agreement forthwith and employ, at the Contractor's risk and cost, another contractor or sufficient number of workmen to complete the work.
- 12) **Force Majeure:**
This clause will be operative only if the work is delayed by
- a) Acts of God
 - b) Earthquake or floods or similar natural calamities.
 - c) Serious loss or damage by fire or lightning.
- In case any Force Majeure condition herein mentioned occurs and continues for a period exceeding 15 days the parties hereto undertake to sit together and devise ways for expeditious and proper performance of the obligations of the parties under this order.

- 13) **Arbitration:**
 “ In the event of any dispute or difference relating to interpretation and application of provisions of the contract and all disputes/ claims whatsoever which shall either during the continuance of the contract or afterwards either between the parties to the contract or the respective representatives touching the construction/ application of any provision/ clause mentioned in the contract or any account or liability between the parties to the contract or as to any act or deed or omission of any party to the contract, in any way relating to these presents, shall be first at the discretion of the Bank attempted to be resolved in good faith by mutual discussion within 30 days of the dispute or question being raised failing which the same shall be settled by arbitration in accordance with provisions of Indian arbitration and Conciliation act 1996.

The Parties concerned shall designate an arbitrator on mutual consent/ consensus. The venue of the arbitration shall be exclusively at LUCKNOW and any award passed by arbitrator shall be final, conclusive and binding upon the parties and shall be deemed to have been made between parties themselves. The parties to the dispute shall share equally the cost of arbitration as intimated by the arbitrator”.

Submitting to arbitration may be considered as an additional remedy and it does not preclude the right of the bank to seek other redressal/ Other Recourse.

- 14) The Bank and the Contractor agree that this agreement is entered in to on Principal to Principal basis. Nothing contained in this agreement shall be construed to create any association, Joint venture or Partnership or Relationship of Principal and Agent or Master and Servant or Employer and Employee between the Bank and the contractor. The parties to the agreement shall be deemed to be independent entity and employees of wither of the parties shall not deemed to the employees of the other. Neither party shall have authority to bind other except to the extant authorized herein.

IN WITNESS whereof the said contracting parties have set their hands and seals on the day and year first hereinabove witness.

SCHEDULE_ I

Correspondence between Tenderer and client
 As witness our hand the day and year first above written.
 Signed by the said employer In the presence of witnesses

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

 Signed by said Tenderer (s): In the presence of witnesses:

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

SECTION :10 PREQUALIFICATION DOCUMENTS: ELIGIBILITY CRITERIA

Indian Bank invites bids from Civil /Furnishing/Electrical &HVAC contractors for Proposed Repair & Renovation of All Hostel Rooms, Related Interior, Civil Works Along With Necessary Infrastructure, External Painting, Replacement of 1 Lift, Electrical Works, Air Conditioning Works in Staff College, Lucknow Campus.

The completion period is 12 Months from the date of awarding of works.

The likely project cost is **Rs.6.36 Crore.** (Approx. Excluding GST)

Bank intends to pre-qualify Contractors who have the requisite qualifying experience specified below:

I. EXPERIENCE:

Contractors who fulfil the following requirements supported with documentary proof shall be eligible to apply.

- a) Should have satisfactorily completed the similar works as mentioned below with a minimum period of 07 years' experience ending last day of the previous month to the one in which tenders are invited i.e. 31.01.2026, shall be either of the following.

S.no	Eligibility criteria	Value— Rs. in Lakhs
1	Three similar (equal to 40%) completed works each costing not Less than	Rs.254.00
2	Two similar (equal to 50%) completed works each costing not less than	Rs.318.00
3	One similar (equal to 80%) completed work each costing not less than	Rs. 509.00

The Following documents shall be considered for evaluating the criteria of work experience:

Self-attested copies of work order, Abstract of BOQ along with completion certificate (**indicating the name of work, final amount, completion date etc.**) issued by the client preferably on their letter head for completed work from the officer not less than rank of Executive Engineer.

- b) Similar work shall mean “ Repairing & Renovation or construction of RCC Buildings of atleast Ground Floor +3 Floors of Institute Buildings / Large Office spaces / Hospitals / Industrial Buildings /Residential Buildings or equivalent buildings in India,of Built-up area not less than 30,000 sqft. The works includes Repairing/Retro-fitting /Construction of RCC building, includes Structural works, Block works, Joineries & Wooden works,Painting & Finishing work,Façade works including Panelling, Glazing etc, Building services such as Electrical, PHE, Fire Fighting, Lift, Mechanical work etc. for Central /State Govt. Departments / Central PSUs/ Central Autonomous bodies/Private limited companies.
- c) Eligible tenderers have to submit copy of TDS certificate & Completion certificate issued by the employer in support work under eligibility criteria for the PQ work along with the Technical bid.
- d) All relevant information should be submitted in the respective format as given in the Forms

II. TURNOVER:

Average annual turnover from the works for the last three years ending 31st March 2025 should not be less than **Rs.2.00 Crores** (30% cost of works) as per the audited balance sheet. Year in which no turnover is shown would also be considered for working out the average.

III. PROFIT/LOSS:

The Tenderer should be a profit (net) making firm year ending 31/03/2025. The agency should be a profit making for at least 03 years (profit after tax should be positive) in last five years ending 31st March 2025 duly certified by Chartered Accountant. Certificate(s) from Chartered Accountant / Statutory auditors specifying the net worth of the Applicants, as at the close of the preceding financial year have to be enclosed.

IV. FINANCIAL STATUS:

The bidders shall be ineligible to be pre-qualified if they have defaulted on any loan to any Bank / Financial Institution (FI) as per Central Repository of Information on Large Credits (CRILC) database or otherwise or its account has been classified as Non-Performing Asset (NPA) with any Bank/ FI or their companies / promoters / directors appear in Reserve Bank of India (RBI) Caution list, RBI Wilful Defaulter List (Suit filed as well as non-suit filed) or Credit Information Bureau of India Ltd (CIBIL) Defaulter List, in last three years which get updated from time to time. On being included in any of the above lists / or any event of default post the pre- qualification process, the Applicant shall immediately inform the Bank on the inclusion and reasons for inclusion thereof.

The Applicant shall furnish such evidence of eligibility satisfactory to the Bank, as the Bank shall reasonably request.

Bank reserves the right to verify the financial status of bidders through the reports of credit rating agencies (as a part of pre-qualification exercise) to pre-qualify the bidders.

V. OTHER CONDITIONS:

- (a) Interested parties meeting the above Tender criteria can download the tender document from banks website www.indianbank.co.in/tenders and submit their tenders along with experience profile, proof of meeting the above criteria, attested copies of completion / work in progress certificates from the clients, audited certified balanced sheet for the last 5 (five) FY years, EPF /GST, Registration as Contractor with various PSUs, State

PWDs, CPWD, MES, Railways and Autonomous Bodies, details of Technical and Administrative employees, etc.,

- (b) Joint Venture: Joint Ventures or consortium of firms are not permitted.
- (c) The work executed under main contractor will not be eligible. (Sub-contractor is not eligible)
- (d) The required documents duly signed by the person authorized to sign the bid shall be submitted as per prescribed norms before the last date & Time of submission of Tender.
- (e) The Panel of pre-qualified tenderers for similar /part scope of works shall be initially valid for three years. However Indian Bank reserves the right to curtail or extend at its sole discretion.
- (f) Indian Bank reserves the right to verify the authenticity of the documents submitted by the tenderers. Indian Bank also reserves the right to reject any or all applications, split the works or cancel the process without assigning any reason whatsoever may be.
- (g) The applicant must have adequate organizational set up as well as having enough experienced personnel, technical know-how and infrastructure to complete the project well within time frame.
- (h) OFFICE IN Lucknow: The tenderer should have registered/local office in Lucknow, In case, If the tenderer is not having their office in Lucknow, Please provide the time by which it is likely to open an office at Lucknow with documentary evidence on address and telephone number of responsible contact person.
- (i) The following shall also be considered while assessing the eligibility of the bidder:
 - i. The bidder should be an Indian firm
 - ii. Experience should be in the name of the bidding company and not in subsidiary/ associate company/ Group Company etc.
 - iii. Bid submitted as Direct / indirect Joint Ventures (JV)/ Consortium/Special Purpose Vehicles of whatsoever kind are not accepted.
 - iv. For the purpose of no. of stories- each basement, stilt constructed in the building shall be construed as a storey. Mumty and Machine room shall not be considered as a storey for this purpose.
 - v. Own works / work under the same management / own certification of the bidder shall not be considered.
 - vi. In case the work experience is in Private sector, the completion certificate shall be supported with copies of Corresponding TDS Certificates.
 - vii. For the purpose of similar works, works executed in India only shall be considered.
 - viii. The works (sub contractor) executed under main contractor will not be considered.
 - ix. The tenderers should have a Solvency of value not less than 30% of estimated cost of the work i.e. **Rs.2.00 crore**, certified by their bankers for this work. Banker's certificates (as prescribed in "A2 FORM") addressed to Tender inviting authority in the current financial year, should be on letter head of the Bank, issued after 01.10.2025

VI. Bidding Capacity

The bidder shall also **have a bidding capacity equal to or more than the estimated cost of the work put to tender**. The bidding capacity shall be worked out by the following formula

$$\text{Bidding capacity} = \{[A \times N \times 1.5] - B$$

Where,

A= Maximum turnover (as per Form A1) in construction works executed in any one year during the last five years taking into account the completed as well as works in progress. For computing bidding capacity, maximum turnover shall be brought to current costing level i.e. upto to previous day of last date of submission for bids by enhancing at a simple rate of 7% per annum.

N = Number of years prescribed for completion of work for which bids has been invited.

B = Value of existing commitments and ongoing works to be completed during the period of completion of work for which bid has been invited.

The bidder shall submit the value of existing commitments and ongoing works (B) as above duly signed by a Chartered Accountant with his seal/ signatures and firm registration number.

The bidder shall submit the bidding capacity "Form- I 1A &1 B "attached along with this tender, duly signed by Chartered Accountant and bidder's authorized representative.

Please note the following: -

- 1) The performance of the bidder for the completed works shall be rated by the Client as satisfactory or above.
- 2) The works completed / being executed by the bidders if required will be inspected by a technical officer /expert authorized by Client. If it is found after inspection that the performance of the bidder for the inspected works is not satisfactory in terms of quality/ time overrun/overall performance etc, the bidder may get disqualified after due verification even though the documents submitted by them will meet the other eligibility criteria as above.
- 3) The bidder shall have GST registration. The copy of GST registration shall be submitted.
- 4) GST registration Certificate of the state in which the work is to be taken up, if already obtain by the bidder is also to be submitted. If the bidder has not obtained GST registration in the State in which the work is to be taken up or as required by GST authorities, then in such case the bidder shall scan and upload following undertaking in their letter head along with other bid documents. "If work is awarded to me, I/we shall obtain GST registration Certificate of the State, in which work is to be taken up within one month from the date of receipt of award letter or before release of any payment by Client, whichever is earlier, failing which I/We shall be responsible for any delay in payments which will be due towards me/us on a/c of the work executed and/or any action taken by Client or GST department in this regard."
- 5) The bidder shall have ESI/ EPF registration. The copy of valid ESI/EPF registration shall be submitted.

The bidder shall submit the affidavit on a Rs.100/- non judicial stamp paper duly notarized, to this effect, as per prescribed format ("**Form J**").

- 6) The bidders shall submit along with the bid a declaration as per FORM-K after the site visit. This is mandatory. **Bids submitted without “FORM-K” the bidder will be summarily rejected and will not be considered for evaluation.**
- 7) The bidder shall submit an affidavit that ‘The work if awarded to us, subcontractors will be employed only for specialized works after getting the concurrence of Client / Architect’
- 8) Organizational chart of the company to be submitted.
- 9) The time allowed for carrying out the work will be 12 months including demolition of existing building from the first date of handing over of the site or 14th day from the date of issue of Letter of Acceptance (LOA), whichever is later, in accordance with the phasing/ milestones, indicated in the tenderdocuments.
 - (i) The site for the work is available.
 - (ii) The labour camp shall not be allowed to locate inside the proposed site.
 - (iii) Required barricading to be done at the construction site.
 - (iv) The Contractor shall settle labour problems if any occurred at site during the construction stage.
 - (v) The bid documents consisting of plans, specifications, the schedule of quantities of various types of items to be executed and the set of terms and conditions of the contract to be complied with and other necessary documents is available on line free of cost.
 - (vi) The bid submitted shall become invalid if:
 - a. The bidder is found ineligible.
 - b. The bidder does not submitted all the documents (including GST registration) as stipulated in the bid document. In case the firm is not registered at the time of submission of bid, they will submit an undertaking that they will get themselves registered with the concerned authorities within 15 days of in case they are awarded the work.
 - c. If any discrepancy is noticed in the documents as uploaded at the time of submission of bid.
 - (vii) The contractor whose tender is accepted will also be required to furnish either copy of applicable licenses/ registration or proof of applying for obtaining labour licenses, registration with EPFO, ESIC and BOCW welfare board and programme chart (time and progress) and manpower deployment schedule within the period specified in schedule.

VI. **Evaluation of performance:**

- a. Evaluation of the performance of contractors for eligibility shall be done by the Client. If required, **the works being executed by the bidders who otherwise qualify will be got inspected by a Technical Officer / Expert authorized by the Client** If it is found that the performance of the bidder for the inspected works is not satisfactory in terms of quality/ time overrun/overall performance etc, the bidder may get disqualified even though the documents submitted by them will meet the eligibility criteria as laid down in clause.
- b. Tenderers are instructed to compulsorily inspect and examine the site and its surroundings at their own cost and satisfy themselves before submitting their tenders as to the nature of the ground and sub soil (so far as is practicable), the form and nature of the site, the means of access to the site, the accommodation they may require and in general shall themselves obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect their tender. The bidder shall be responsible for arranging and maintaining at its own cost all materials, tools & plants, water, electricity, access, facilities for workers and all other services required for executing the work unless otherwise specifically provided for in the contract documents. Submission of a tender by a bidder implies that he has read this notice and all other contract documents and has made himself aware of the scope and specifications of the work to be done and local conditions and other factors having a bearing on the execution of the work. **The bidders shall submit along with the bid a declaration as per FORM-K after the site visit. This is mandatory. Bids submitted without FORM-K the bidder will be summarily rejected and will not be considered for evaluation.**
- c. Client shall not be liable for such costs, regardless the outcome of the selection process.
- d. The Competent Authority of the Client does not bind itself to accept the lowest or any other tender and reserves to itself the authority to reject any or all the tenders received without the assignment of any reason. All tenders in which any of the prescribed condition is not fulfilled or any condition including that of conditional rebate is put forth by the bidder shall be summarily rejected.
- e. Canvassing whether directly or indirectly, in connection with tenders is strictly prohibited and the tenders submitted by the contractors who resort to canvassing will be liable to rejection.
- f. The competent authority of Client reserves to himself the right of accepting the whole or any part of the tender and the bidder shall be bound to perform the same at the rate quoted.
- g. The contractor shall not be permitted to tender for works in case his near relative/s is Staff in Client or in the Managerial cadres of Client and is directly dealing with the Project. Any breach of this condition by the contractor would disqualify him from participation and consideration in the tender process.
- h. The tender for the works shall remain open for acceptance for a period of **120 (ONE HUNDRED AND TWENTY)** days from the LAST date of submission of bid or any extension thereto. If any bidder withdraws his tender before the said period or issue of letter of acceptance, whichever is earlier, or makes any modifications in the terms and conditions of the tender which are not acceptable to the Client, then the Client shall, without prejudice to any other right or remedy, be at liberty to forfeit 100% of the said earnest money as aforesaid. Further the bidder shall not be allowed to participate in the re-tendering process of the work

- i. **Bank reserves the right to Negotiate with the L1 bidder through the Bank's committee for finalizing the L1 bid price, if required.**
- j. This is a Time Bound Project and The Bidder must associate with the other agencies working at the site.
- k. Registration/ License: The bidder should have their registration for GST, PF, ESIC, Building Cess Registration etc. (whichever is applicable), with the appropriate Authorities. In case the firm is not registered at the time of submission of bid, they will submit an undertaking that they will get themselves registered with the concerned authorities in case they are awarded the work.
- l. The contractor/firm will indemnify Client, as the case may be, against all penal action that may be levied/effected by any concerned authority for default in any labour regulation/PF/ESI and other statutory requirements of the relevant Acts/Laws related to the work of the contractor and will bear the legal charges, if any, and will pay the legal charges/dues directly to the concerned authority. An undertaking in this regard is required to be submitted by applicants along with prequalification.
- m. This Notice Inviting bid shall form a part of the contract document. The successful Tenderer/contractor, on acceptance of his tender by the Accepting Authority, shall, **within 14 days** from the date of issue of the Letter of Acceptance, sign the contract consisting of :-

The Notice Inviting Bids, all the documents including General Conditions of the Contract, Specific Conditions of Contract, Specifications, Bill of Quantities and drawings, if any, forming the tender as issued at the time of invitation of tender and acceptance thereof together with any correspondence leading thereto including amendments, corrigendum etc. if any.

Client reserves the right to accept or reject any or all the tenders without assigning any reason, No Bidder shall have any cause of action or claim against the Client for rejection of his tender.

Payments to the selected Contractor will be made directly by CLIENT through bank transfer after certification by the Architect.

SECTION.11. IMPORTANT INSTRUCTIONS TO APPLICANTS

The applicants who have down-loaded the PQ Document from the web, should read the following important instructions carefully before submitting the documents: -

- a) The applicants should see carefully & ensure that the **complete PQ documents** are downloaded.
- b) The printout of PQ document should be taken on A4 size paper only & the printer settings etc. are such that document is printed as appearing in the web & there is no change in formatting, number of pages etc.
- c) The applicant should ensure that **no page** in the down-loaded PQ document is **missing**.
- d) The applicant should ensure that all pages in the down-loaded PQ document are **legible, clear** & are printed on a good quality paper.
- e) The applicant should ensure that **every page** of the down-loaded PQ document is **signed by applicant with stamp (seal)**.
- f) The applicant should ensure that the down-loaded PQ document is **properly bound and sealed** before submitting the same.
- g) In case of any correction / addition / alteration / omission in the PQ document by the applicant, it shall be treated as non-authenticated and is not acceptable.
- h) The applicant shall furnish a declaration to the effect that no addition deletion / corrections have been made in the PQ document submitted and it is identical to the PQ document appearing on website.
- i) The applicant should read carefully & sign all the declaration form **before** submitting the PQ/tender document.

In case of any clarification in downloading of document, the same should be got clarified from Indian Bank before submitting the tender document.

SECTION 12: FORMS

FORM 'A1'

FINANCIAL INFORMATION

Name of bidder:.....

Financial Analysis-Details to be furnished duly supported by figures in balance sheet/ profit & loss account for the last five years duly as submitted by the applicant to the Income tax Department (Copies to be attached) and duly certified by the Chartered Accountant mentioning the membership number issued by ICAI along with the full address.
Gross Annual Turnover for last three years ending 31.03.2025

Financial Year	Annual Turn Over in Indian Rupees (or equivalent to Indian Rupees) as per Audited Balance Sheet
2022-23	Rs.
2023-24	Rs.
2024-25	Rs.
Average Annual Turnover over the past three years	Rs.

i) **Profit / Loss** for last Five years ending 31.03.2025

Financial Information in Rs. Equivalent	For year 2020-21	For year 2021-22	For year 2022-23	For year 2023-24	For year 2024-25
1. Total Assets					
2. Current Assets					
3. Total Liabilities					
4. Current Liabilities					
5. Net working capital (2-4)					
6. Current Ratio					
7. ACID Test Ratio					
8. Profit before Tax					
9. Profit after Tax					
10. Net Worth					
11. Solvency as mentioned in the Certificate duly certified by Bank					

Please enclose

- (a) Note: Income Tax Assessment orders/IT Returns submitted for the last 5 years.
- (b) Solvency Certificate from Bankers (Scheduled bank) of Applicant.
- (c) Audited Balance Sheet and P& L Account for the last 5 years

Signature of Chartered Accountant with Seal

FRN Number-----

Signature of Bidder.

UDIN Number----

FORM-A2

FORM OF BANKERS' CERTIFICATE FROM A SCHEDULED BANK

SOLVENCY CERTIFICATE (Should be obtained for a period after 01-10-2025)

Dated:

To

This is to certify that to the best of our knowledge and information that M/s./.....
.....having marginally noted address, a Customer of our bank are/is respectable
and can be treated as good for any engagement upto a limit of Rs.
(Rupees.....).

This certificate is issued without any guarantee or responsibility on the bank or any of the officers.

(Signature) For the Bank

NOTE

(1) Bankers certificates should be on letter head of the Bank, addressed to tendering authority.

FORM-A3

TDS DETAILS FOR PRIVATE / PUBLIC SECTOR PROJECTS FOR THE WORKS EXECUTED IN INDIA

Sl. No.	Description	Details
1.	Name of work	
2.	Name of Clients	
3.	Project cost in crores	
4.	No. and date of completion certificate	
5.	Cost of the work on completion in crores	
6.	Payments received as per TDS in Crores	
7.	TDS Corresponding to the payments	
8.	Year wise TDS as per form-26AS/ Form 16A relating to the work.	

Note:

1. Value of work done will be considered commensurate with value of TDS certificates.
2. In case of multiple contracts undertaken from a client, reconciliation for the TDS pertaining to the work mentioned above need to be segregated and reconciled with Form-26AS.
3. This form need to be supported with form-26AS taken in HTML format or Form -16A.

Signature of Chartered Accountant with Seal FRN No.
 UDIN No.-----

Membership No.

Signature of Bidder.

FORM B

**DETAILS OF ALL WORKS OF SIMILAR CLASS COMPLETED
 DURING THE LAST FIVE YEARS ENDED 31.12.2025.**

SL:NO	DESCRIPTION	DETAILS
1	Name of the Employer	
2	Name of work /project & location	
3	Name of the architect /Consultant	
4	Scope of work*	
5	Cost of work (Rs. In lakh)	
6	Date of commencement as per contract	
7	Stipulated date of completion	
8	Actual date of completion	
9	Litigation/Arbitration pending/ In progress with details**	
10	Name and address/ tel. no. of officer to whom reference may be made	
11	Remarks	

*Preferably Pertaining to Building Restoration/renovation works to plumbing lines etc. /interiors for Commercial Projects etc.

** Indicate gross amount claimed and awarded by the arbitrator.

FORM B1

ADDITIONAL INFORMATION FOR COMPLETED WORKS (BIDDER CAN SUBMIT MORE FORMS BASED ON NUMBER OF WORKS)

1. Name of work
2. Location
3. Client s name and address
4. Consultants name and address.
5. Type of renovation works done (Restoration/Repairs, Furnishing & Renovation works etc.)

FORM C

PROJECTS UNDER EXECUTION OR AWARDED

SL:NO	DESCRIPTION	DETAILS
1	Name of work /project & location.	
2	Owner of sponsoring organizations.	
3	Cost of work (Rs. In lakh).	
4	Date of commencement as per Contract.	
5	Stipulated date of completion.	
6	Up to date percentage progress of Work.	
7	Slow progress if any and reasons Thereof.	
8	Name and address/ tel. no. of officer to whom reference may be made.	
9	Remarks (indicate whether any show cause notice issued, or arbitration initiated during the progress of work.	
10	Name of work /project & location.	

FORM D

PERFORMANCE REPORT FOR WORKS REFERRED TO IN FORM B & C

1. Name of the work/ Project & Location.
2. Estimated Cost
2. Tenderer Cost
3. Value of work done
4. Date of Start
5. Date of completion
Stipulated date of completion.
Actual date of completion
6. Amount of compensation levied for delayed Completion if any.
7. Performance report based on Quality of Work, Time Management,
and Resourcefulness : Very Good / Good / Fair

Date:

Superintending Engineer/
/DGM/Chief Project Manager
Or Equivalent

FORM E

STRUCTURE AND ORGANISATION

SL:No	Description	Remarks
1	Name and address of the applicant	
2	Telephone No./Fax No/E-Mail address	
3	Legal Status (attach copies of original document defining the legal status) An Individual A proprietary Concern A Firm in partnership A Limited Company or Corporation	
4	Particulars of registration with various Government bodies (Attach attested photo-copy) GST Registration Number. Pan-Card Number. Organization / Place of registration	
5	Names and Titles of Directors and officers with designation to be concerned with this work with Designation of individual authorized to act for the organization.	
6	Was the applicant ever required to suspend works for a period of more than six months continuously after commencement of works If so, give the name of the project and give reasons thereof.	
7	Has the applicant or any constituent partner in case of partnership firm/ Company, ever abandoned the awarded work before its completion? If so, give the name of the project and give reasons thereof	
8	Has the applicant or any constituent partner in case of partnership firm / Company, ever been debarred/black listed for tendering in any organization at any time? If so, give details:	

<p>9</p>	<p>Has the applicant or any constituent partner in case of partnership Firm or any Director in case of a Company or any criminal proceedings presently pending, ever been convicted by a court of law? If so, give details.</p>	
<p>10</p>	<p>In which field of interior, Furniture and Furnishing works, you can claim specialization and interest</p>	
<p>11</p>	<p>Any other information considered necessary but not included above.</p>	

FORM E-1

DETAILS OF KEY TECHNICAL AND ADMINISTRATIVE PERSONNEL EMPLOYED BY THE FIRM / COMPANY

SL NO	1	
Designation	2	
Total Number	3	
Names	4	
Qualification	5	
Professional Experience	6	
Length of Continuous service with employer	7	

Note: Additional information about Technical personnel, if any, may be submitted on separate sheet.

Eligibility Criteria

SL:No	Description	Details
1	Name of the Tenderer	
2	Address	
3	Contact No.	
4	Email	
5	Legal Status- Prop/Private Limited / Public etc.	
6	Date of Establishment / experience	
7	Membership details, If any	
8	Area of specialization / interest I.e Interiors/ Furnishing / repairs etc.	
9	<p>Work Experience during the last 5 years ending 31.12.2025.</p> <p>3 Similar completed works each costing not less than 40% of the estimated cost i.e. Rs. 254.00 Lakh</p> <p style="text-align: center;">OR</p> <p>Two similar completed works each costing not less than 50% of the estimated cost i.e. Rs. 318.00 Lakhs</p> <p style="text-align: center;">OR</p> <p>One similar completed work costing not less than 80% of estimated cost i.e. Rs. 509.00 Lakhs</p>	
10	Average annual turnover during the last 3 completed financial years, ending 31.03.2025 should be at least Rs. 200.00 Lakhs	
11	Should be solvent to the extent of Rs. 200.00 Lakhs . Copy of latest solvency certificate issued by a commercial Bank to be furnished. The certificate should have been issued during the year 2025.	
12	The Contractor should necessarily have a full-fledged office or Branch Office (Existing / Proposed) in Lucknow (Uttar Pradesh) with adequate staff. (Telephone No. and address to be furnished)	

14	The Contractor should have sufficient number of technical and administrative personnel for proper execution of contract (Civil, Interior electrical etc.). The Contractor should submit a list of their employees (in Head & Branch Office)	
15	DD Details for EMD	
16	No. of key technical personnel	
17	Major clientele	
18	Whether Copies of audited balance sheet of the company including Profit and Loss Account for the last five years ended 31.03.2025	
19	Whether done similar works, if so brief details	
20	Project under execution / awarded (Top 3) along with cost of work.	

FORM G

PROFORMA ON ISO CERTIFICATION

(If available)

1. Year of Certification
2. Name and Address of Certifying Agency
3. Name of Management Representative
4. Validity of Certificate

Note: Attested copy of certificate to be enclosed

AFFIDAVIT

(To be prepared in a 100-rupees non-judicial stamp notarized, duly signed and sealed by the authorized signatory)

1. I, the undersigned, do hereby certify that all the statements made in the required attachments are true and correct.
2. The undersigned also hereby certifies that our firm M/s _____ have neither abandoned any contract awarded to us nor such works have been rescinded, during the last five years prior to the date of this application.
3. The undersigned also hereby confirm that M/s _____ have not been under blacklisting or debarred or penalized from bidding by any government agency or public sector undertaking or judicial authority/arbitration body as on last date of submission of bid
4. The undersigned hereby authorize (s) and request (s) any bank, person, firm or corporation to furnish pertinent information deemed necessary and requested by the Department to verify this statement or regarding my (our) competence and general reputation.
5. The undersigned understands and agrees that further qualifying information may be requested, and agrees to furnish any such information at the request of the CLIENT.
6. The undersigned hereby confirmed that if the work is awarded to us, the work will be executed with utmost quality and in case of any rectification suggested by Client any stage of work due to poor quality, the same will be re executed by us at free of cost.
7. The undersigned undertake that 'I/We have not altered/ modified the financial bid attached in the e-tender portal. If it is found during the tender stage or later that the BOQ is modified by us, the Client shall have the right to reject our bid'.
8. The undersigned hereby confirmed that 'The work if awarded to us will be directly executed by us and subcontractors will be employed only for specialized works after getting the concurrence of Client/ Architect'.
9. The Undersigned hereby confirm that we will provide required services during the Defect Liability Period and will provide warranty to the system as per tender requirement.
10. The Undersigned hereby confirmed that we have not suppressed any fact for being eligible to bid.

Signed by an Authorized Officer of the Firm

Form " I 1A"

FORM FOR BIDDER'S BIDDING CAPACITY

Name of the Firm/Bidder: -

Name of the Work: Proposed Repair & Renovation of All Hostel Rooms, Related Civil Works Along with Necessary Infrastructure, interior External Painting, Replacement of 1 Lift, waterproofing works Electrical Works, Air Conditioning Works in Staff College Lucknow Campus.

Ref:

The Bidding capacity of the bidder should be equal to or more than the estimated cost of the work put to tender. The bidding capacity shall be worked out by the following formula:

$$\text{Bidding Capacity (Rs.)} = \{[AxNx1.5]-B\}$$

(Calculation sheet of working out Bidding capacity shall be attached) Where,

A= Maximum turnover (as per Form T-1) in construction works executed in any one year during the last five years taking into account the completed as well as works in progress. The maximum turnover shall be brought to current costing level i.e. upto to previous day of last date of submission for bids by enhancing at a simple rate of 7% per annum.

N = Number of years prescribed for completion of work for which bids has been invited.

B = Value of existing commitments and ongoing works to be completed during the period of completion of work for which bid has been invited. (Details to be attached, signed & sealed by CA in 'Form F1-A')

Calculation

Maximum turnover in last seven years = Rs..... (Year..)

Updated value of turnover (A) = Rs.....

Value of existing commitments and ongoing works (B) = Rs.....

No. of years (N) =

Bidding Capacity= {[AxNx1.5]-B} =

Bidding Capacity (Rs.).....

Signature of Chartered Accountant with Seal

FRN Number-----

UDIN Number----

Signature of Bidder(s)

“Form I 1B”

BIDDING CAPACITY

Name of the Work: Proposed Repair & Renovation of All Hostel Rooms, Related Civil Works Along with Necessary Infrastructure, interior External Painting, Replacement of 1 Lift, waterproofing works Electrical Works, Air Conditioning Works in Staff College Lucknow Campus.

Ref:

Value of existing commitments and ongoing works to be completed during the period of completion of work for which bid has been invited.

SI No.	Name of work/Project and location	Client / owner	Contract Value (Rs Cr)	Date of commencement as per contract	Stipulated date of completion	Upto date percentage progress of work	Remaining work in percentage (100- column 7)	Existing commitment Column 4 x Column 8 /100	Name and address/ telephone number of officer to whom reference	Remarks
1	2	3	4	5	6	7	8	9	10	11

Signature of Chartered Accountant with Seal

FRN Number-----

UDIN Number----

Signature of Bidder(s)

FORM-J

UNDERTAKING

(On a Rs 100/- non judicial stamp paper duly notarized)

We do hereby indemnify CLIENT/Client, against all penal action that may be levied/effectuated by any concerned authority for default in any labour regulation/PF/ESI and other statutory requirements of the relevant Acts/Laws related to the work of the contractor and will bear the legal charges, if any, and will pay the legal charges/dues directly to the concerned authority.

Signed by an Authorized Officer of the Firm

FORM-K

FORMAT FOR UNDERSTANDING THE PROJECT SITE
(on Bidder Letter Head)

I/we hereby certify that I/we have examined & inspected the site & its surrounding satisfactorily, where the project is to be executed as per the scope of works. I/ We are well aware about the Location and conditions etc.

I / We hereby submit our BID considering above all facts gathered during site visit and each & every aspect has been considered in the Quoted cost of the project as per BOQ.

1. Name of Bidder Representative with Designation visited the site: -
.....
 2. Name of Bidder/Firm:-.....
- Tender to be participated by Bidder: -
- Name of Site visited with dates: -

on

on

Please add on as required

(Name with designation) Representative of the Agency/Firm

“Form L”

FORMAT FOR POWER OF ATTORNEY FOR SIGNING OF PROPOSAL FOR

AUTHORIZED SIGNATORY (in stamp paper of appropriate value)

Know all men by these presents, we
(Name of the Tenderer and address of their registered office) do hereby constitute, appoint and authorize Mr / Ms (name and residential address of Power of Attorney holder) who is presently employed with us and holding the position of as our attorney, to do in our name and on our behalf, all such acts, deeds and things necessary in connection with or incidental to our Bid for the Project and submission of all documents and providing information / responses to _____, representing us in all matters before __, and generally dealing with __ in all matters in connection with our proposal for the said Project.

We hereby agree to ratify all acts, deeds and things lawfully done by our said attorney pursuant to this Power of Attorney and that all acts, deeds and things done by our aforesaid attorney shall and shall always be deemed to have been done by us.

For (name of authorised representative of firm)

Witness:.....

Accepted..... (signature & details of POA holder)

SECTION.13

LETTER OF TRANSMITTAL

To

CHIEF GENERAL MANAGER
FGM :LUCKNOW
FGM Office,
1st Floor (New Building)
Hazaratganj, Lucknow

Sir,

Sub: Technical Bid for Proposed Repair & Renovation of All Hostel Rooms, Related Civil Works Along with Necessary Infrastructure, interior External Painting, Replacement of 1 Lift, waterproofing works Electrical Works, Air Conditioning Works in Staff College Lucknow Campus.

Having examined the details given in pre-qualification Web-Notice and PQ document for the above work, I/we hereby submit the PQ documents (issued / downloaded from web) and other relevant information.

I/We hereby certify that all the statements made and information supplied in the enclosed forms A to L and accompanying statements are true and correct.

I/We have furnished all information and details necessary for pre-qualification and have no further pertinent information to supply.

I/We Submit The Requisite Certified Solvency Certificate And Authorize The **CHIEF GENERAL MANAGER/FGM :LUCKNOW,FGM Office,1st Floor (New Building) ,Hazaratganj, Lucknow** To Approach The Bank Issuing The Solvency Certificate To Confirm The Correctness Thereof.

I/We also submit prescribed declaration in respect of downloaded PQ document. (Applicable only in case of application on downloaded PQ document)

I/We submit the following certificates in support of our suitability, technical know-how & capability for having successfully completed the following works

SL.NO	Name of Work	Certificate from

Enclosures:

Seal of applicant
 Date of submission

SECTION 14 . DECLARATION

It is to certify that

- 1) I / We have submitted the PQ document in the preformed as **down-loaded directly from the web site & there is no change in formatting, number of pages etc.**
- 2) I / We have submitted PQ document which **are same / identical** as available in the website.
- 3) I / We have **not made any modification / corrections / additions etc** in the PQ documents downloaded from web by me / us.
- 4) I / We have checked that **no page is missing** and all pages as per the index are available & that all pages of PQ document submitted by us are **clear & legible.**
- 5) I / We have **signed (with stamp) all the pages** of the PQ document before submitting the same.
- 6) I / We have **sealed** the PQ documents properly before submitting the same.
- 7) I / We have submitted the cost of PQ document.
- 8) I /We have read carefully & understood the instructions to all the applicants & to the applicants who have down-loaded the PQ document from the web.
- 9) In case at any stage later, it is found that there is difference in our downloaded PQ documents from the original, BANK shall have the absolute right to take any action as deemed fit without any prior intimation to me / us.

Place:

Dated:

Sign & Seal of applicant

**Proposed Repair & Renovation of All Hostel Rooms,
Related Civil Works along with Necessary
Infrastructure, INTERIOR External Painting,
Replacement of 1 Lift, Electrical Works, Air
Conditioning Works in Staff College Lucknow Campus.**

TECHNICAL SPECIFICATIONS

SECTION 15: GENERAL TERMS OF TENDERS & SPECIFICATION.

1. Any discrepancies found in the drawings or tender shall be brought to the notice architect before quotation/ execution.
2. The Organization/Architect is not responsible for loss of materials, damagers to works, injury or loss of life of workers. The contractors themselves are responsible for any liability on these accounts.
3. The Organization/Architect is not responsible for the delay in completion due to non-availability of materials or natural calamities or strikes etc. Extension of time may be followed for valid reasons only.
4. The contractors shall remove all the remaining materials, tools, etc., clean the premises and hand over after completion of the work.
5. The decision of the architect shall be final and binding with regard to the additions or over after completion of the work alterations in the designs/ items of work, disputed of measurements, quality, rates etc.,
6. The organization may delete / reduce the items of work at any time of progress or before commencement for which the contractors shall not be compensated.
7. The Organization/Architect may terminate the contract during the progress of works, if the quality of workmanship /materials /speed are not to the satisfaction of the organization/ architect.
8. During the progress of work the premises shall be kept open at any time for inspection by the architect or authorities of the organization.
9. The contractors shall co-operate with other agencies like plumber, electrical contractor etc., in all respects to complete the works effectively and in time.
10. The following specifications of items of works/ measurements/ conditions may be adopted for applicable items of works.
11. If any changes are incorporated by the tenderer in the tender conditions / drawings/ specifications, such tenders are liable for rejection.
12. The contractor shall not sublet the contract works in whole or in part without permission of the architect/ organization. Work executed by the sub-contractor shall also be covered under the agreement and obligation of the main contractor.
13. The contract shall be terminated during the execution of works if the contractor or sub-contractor is found to be deviating from the designs/ specifications/ instructions provided by the architect.
14. The Architect / Organization reserves the right to award the contract in part or whole or any tender or all tenders without assigning any reasons.
15. The drawings shall not be measured. Only the written dimensions shall be followed for quotation / execution.
16. In case of difference between the specifications and the drawing of a particular item of work, specification only should be considered for quotation / execution.
17. Important Note: Without EMD For the Tender Quotation Is Liable To Be Rejected.

GENERAL SPECIFICATIONS

1. All the materials used shall confirm to BIS or equivalent specifications and standard in quality.
2. All the materials of works shall be inspected and certified by the architect before use at site.
3. Aluminum extrusions shall be 1.5 mm thick or of 16 gauge and anodized aluminum of Indal / Jindal companies.
4. Aluminum grill shall be of heavy gauge with openings not more than 2 size for cash cabin/windows and shall be of Aluminum grills / Ravin companies.
5. The accessories like aluminum clips, clamps, pivotal system etc. for aluminum works shall be of heavy gauge and rubber beading shall be of good quality.
6. All the blocks / ply woods shall be of Approved make as per list and as specified by the head office of the bank.
7. The plastic laminates shall be of 1.0 mm /1.5 mm thickness of Approved make as per list.
8. Both sides pre-laminated particle boards shall be of Approved make as per list.
9. The Plain glass shall be of 6mm/ 12 mm (Toughened) thickness of Approved make as per list.
10. The door closures shall be of Approved make as per Approved make as per list.
11. The multipurpose locks for shutters / drawers of furniture shall be of Approved make as per list.
12. The handles for shutter / drawers shall be metallic / powder coated / recessed type rose wood. The ball catches shall be of brass and of big size. The piano hinges shall be of heavy gauge.
13. All the doors shall be provided with mortise locks of Approved make as per list.
14. All the wooden furniture shall be provided $\frac{3}{4}$ dia. P.V.C. bushes at the bottom, at every 2 - 6 distances.
15. All the teak wood and beadings on facing surfaces shall be finished with 3(Three) coats of Light house colorless polishing after sand papering etc.
16. Synthetic enamel painting shall be of 2 (Two) coats over a coat of primer after putty and sand papering, etc.,

WORKMANSHIP

1. All the exposed ends of block / ply / pre-laminated boards shall be covered with teak wood beadings of required size and design.
2. All the facing and exposed surfaces of block / ply boards shall be plastic laminated and unexposed surfaces shall be finished with 2 coats of synthetic enamel painting.
3. Any wood used shall be well seasoned and free from defects.
4. All the patch works shall be completed to give matching and finished look and the rates shall be inclusive of the finishing work.
5. The finishing color and designs of the materials shall be approved by the architect before execution.
6. The entire block / ply / wooden furniture shall be inspected and certified by the architect after fabrication but before painting / polishing or plastic lamination at site.

MEASUREMENTS, RATES & PAYMENTS

1. The measurement of each work executed and billed shall be as per actual. The rates shall be inclusive of wastages, transport and all taxes.
2. The organization / architect will not consider the escalations / fluctuations in basic rates of material or labour charges.
3. The tenderer shall affix his signature if any changes / corrections are made for quoted rates.
4. The payments shall be released after deductions as per rules of the income tax department.
5. The Completion Period for works in all respected shall be 12 Months (Including holidays).
6. Security deposit of 10% (Ten percent only) of the final bill will be deducted before payment. The deposit will be released after the defects liability period without interest.
7. The FINAL BILL shall be submitted by the contractors only after the virtual completion of the works in all respect to the satisfaction of the architect and head of the section / bank.
8. The DEFECTS LIABILITY period is 12 (Twelve) months from the date of certification of the final bill by the architect including at least one monsoon after completion of works. Any defects found during this period shall be rectified by the contractors at their own cost. If the defects are not rectified by the contractors and if they are rectified by others, the charges of rectification shall be recovered from the contractors.
9. For showcase, wardrobes, etc., the measurements shall be taken as clear inner sizes only.
10. Important Note: All the Tender Pages Shall Be Signed by Contractor or Else Will Be Rejected.

SECTION 16: CIVIL WORKS TECHNICAL SPECIFICATIONS

GENERAL SPECIFICATIONS

To be read in unison with particular specifications and bill of quantities

These specifications are for work to be done, item to be supplied and materials to be used in the works as shown and defined on the drawings and described herein, to the satisfaction of the Employer / Architect.

1. General:

- i. The workmanship is to be the best possible and of a high standard. The Tenderer shall take all steps immediately to make up deficiency if any noticed by the Employer/ Architect.
- ii. The materials to be provided by the Tenderer shall be in accordance with the samples already got approved from the Employer/ Architect by the Tenderer and in conformity with specification and approved list of manufactures and brand. The Tenderer shall produce all invoices, vouchers or receipts for any materials if called upon to do so by the Employer/ Architect.
- iii. Samples of materials are to be submitted to the Employer/ Architect for their approval before the Tenderer orders or deliver the materials to the site. Samples together with their packing are to be provided free of charge by the Tenderer and should any materials be rejected they will be removed from the site at the Tenderers expense. All samples will be retained by the Employer/ Architect for comparison with materials which will be delivered at site. Also the Tenderer will be required to submit specimen finishes of colors, fabrics, etc. for the approval of the Employer/ Architect before proceeding with the works.
- iv. The Tenderer shall be responsible for providing and maintaining temporary coverage required for the protection of finished work. He is also to clean out all wood shavings, cuts ends and other waste from all parts of the works before covering or in fillings is constructed.
- v. The Tenderer shall maintain uniform quality and consistency in workmanship throughout the execution of the work.

2. Joinery in wood work

1. The contact surfaces between internal frame and skinning shall be glued with approved adhesive in addition to fixing with necessary screws etc.
2. After preparing proper surface of skinning by sand papering etc., the laminates or veneers shall be fixed on it with the help of approved adhesive.
3. Framework for full height partition shall be rigidly fixed to the floor, walls and ceiling soffit. The partition height shall be measured up to bottom of false ceiling and framing members / ply going above shall not be measured.
4. Any portions that are warped or found with other defects are to be replaced. The whole of the work is to be framed and finished in a workman-like manner in accordance with the detailed drawings and the direction of PM / Architect and whenever required, fitted with all necessary metal ties, straps, screws, adhesive, etc. joinery work generally to be finished with fine sand / glass paper.
5. All joints shall be standard mortise and tendon, dowel, or cross halved screws, nails, etc. will be of standard iron or wire. Tendons should fit the mortise exactly.
6. Nailed or glued butt joints will not be permitted.
7. Wherever screw heads are on finished surface those will be and the hole plugged with a wood plug of the same wood and grain to match the colour.

3. Timber

1. All the wood be used shall be properly seasoned ,of natural growth and shall be free from worm holes ,loose or dead knots or other defects, sawn square and shall not suffer warping ,splitting or other defects. White cedar, Malaysian Sal both of 1st quality.
2. All internal frameworks shall be treated with approved wood preservative.
3. All wood brought to the site be clean it shall not have any preservative or other coating/ covering.
4. All rejected, decayed, bad quality wood shall be immediately removed from site.
5. All the dimensions mentioned for any Wood members are finished sizes.
6. All exposed T. W to receive polish and should be of 1st quality Indian T.W.

4. Plywood

1. Marine plywood shall generally conform to IS 71 0-1980, bonded with phenol formaldehyde, B.W.P / BWR grade.
2. Commercial plywood shall generally conform to IS: 303 bonded with phenol formaldehyde, MR grade.

5. Hardware and Metals

1. All the screws /bolts with nuts to be used shall have oxidized finish (unless required otherwise) of approved shape, size and quality.

2. Fittings shall be only SS, or Brass and suitable for heavy duty unless specified otherwise.
3. Samples of all hardware are required to be got approved in advance.
4. The agencies should cover-up and protect the brass surface against oxidation by suitable material as necessary and subsequently clean it away at the same time of handing over.
5. All hardware shall be fitted with good workmanship without the surrounding edges being damaged.

6. Laminate

- a. All laminate shall be 1 mm thick of approved make or as directed.
- b. The Tenderers shall get the sample showing the surface texture, pattern and color approved, by Employers / Architect.

7. Fabrication in metal

All brazing and welds are to be executed in a clean and smooth manner, rubber down and finished in flat and tidiest way, particularly where exposed.

8. Glass

1. All glass to be approved manufacture, complying with I.S 3548-1960, or as per approved quality and sample, to be of the qualities specified and free from bubbles, air holes, waviness and other defects.
2. In cutting glass, proper allowance shall be made for expansion.
3. Glass for mirror shall be silvering quality (S.Q) Conforming to I.S 3458-1958 or as approved sample and quality.
4. On completion, all glass surfaces shall be cleaned inside and out, all cracked, scratched glass / mirror shall be replaced.

9. Paint and Polishes

1. All material required for the works shall be specified and approved manufacture, delivered to the site in the manufacturers containers with the seals, etc., unbroken and after use empty containers shall be stored till finally cleared by the employers.
2. All iron or steel / metal surfaces shall be thoroughly scrapped and rubbed down with the brushes and shall be entirely free from rust, mill scale, etc. before applying the primary coat.
3. Metallic polish finishes shall be properly finished, without any flow marks, spots, roughness etc.
4. Painting work shall be of high standard, without any brush marks on the finished surfaces and no spots on adjacent furniture, glass, etc.

10. FLOOR TILES

Vitrified tiles, ceramic tiles, chequered tiles, terrazzo tiles shall conform to IS: 1237. For neutral shade tiles grey cement shall be used. Tiles shall be hydraulically pressed. It shall be of choice shade and shall have desired pattern of chip distribution. The size and thickness of tiles shall be as approved by the Architect / Indian Bank.

11. GLAZED TILES

White or colored glazed tiles shall comply with IS: 777. It shall be from an approved manufacturer and shall be flat and true to shape. They shall be free from cracks, crazing, spots, chipped edges and corners. The glazing and color shall be of uniform shade and unless otherwise specified the tile shall be min mm thick.

12. PAINTS

Dry distemper, oil bound distemper, cement primer, oil paint, enamel paint, flat oil paint, plastic emulsion paint, anti-corrosive primer, red lead, water proof cement paint shall be from an approved manufacturer and shall conform to the latest Indian Standards for various paints, Ready mixed paints as received from the manufacturer without any admixture shall be used, except for addition of thinner, if recommended by the manufacturer.

13. PANELED SHUTTERS

Panel shall be of pattern and size as shown on the drawings or as directed by the Employer/Architect. Panels shall be in one piece wherever possible. Panels shall be frames into grooves made in styles and rails to the full depth of groove and faces shall be closely fitted to sides of grooves.

14. FIRE RETARDANT FLUSH DOOR

All Fire Retardant flush doors shall be solid core unless otherwise specified. It shall conform to the relevant specifications of I.S 2202 and shall be obtained from approved manufacturers. The finished thickness of the shutter shall be as mentioned in the item. Face veneers shall be of the pattern and color approved by the Employer / Architect and an approved sample shall be deposited with the Employer/Architect for reference. The solid core shall be of wood laminate prepared from battens of well-seasoned and treated good quality wood having straight grains. The battens shall be of uniform size of about 2.5 cm width. These shall be properly glued and machine pressed together with the grains of each piece reversed from that of adjoining one. The longitudinal joints of the battens shall be staggered and no piece shall be less than 50 cm in length. Alternatively the core shall be of solid teak particle board. Edges of the core shall be lipped with first class teakwood patterns of 4 cm. (11/2).Min depth, glued and machine pressed along the core.

15. PAINTING OIL / ENAMEL / PLASTIC EMULSION ETC.

Ready mixed oil paint, plastic emulsion paint, ready mixed synthetic enamel paint, Aluminum paint, etc., shall be brought in original containers and in sealed tins. If for any reason thinner is necessary the brand and quantity of thinner recommended by the manufacturer or as instructed by the Employer / Architect shall be used.

The surface shall be prepared as specified above and cost of approved primer shall be applied. After 24 hours, drying approved of specified quality paint shall be applied evenly and smoothly. If required filler putty coating may be given to give smooth finish. Each coat shall be allowed to dry out thoroughly and then lightly rubbed down with sand paper and cleaned of dust before, the next coat is applied. Number of coats shall be as specified in the item and if however, the finish of the surface is not uniform coats as required shall be applied to get good and uniform finish at no extra cost. After completion no hair marks from the brush or clogging of paint puddles in the corners of panel angles of moldings shall be left on the work. The glass panes floor etc. shall be cleaned of stains.

When the final coat is applied, if directed, the surface shall be rolled with a roller or if directed it shall be stippled with a stippling brush.

16. ACP CLADDING

ACP consists of a polyethylene core and 2 Aluminum skins (each 0.50 mm/0.25mm thick) for exterior cladding on new buildings and renovation applications. Aluminums Panel making plant with an online laminator, using catalytic fusion process. ACP key component, the PVDF coated aluminum (skin) is directly imported. ELFAUTOCHEM manufactures the PVDF coated aluminum; KYNAR 500 is world renowned for high quality and even finish and long lasting colors. The catalytic fusion process ensures each panel has high quality of KYNAR 500 PVDF coating on the top with a minimum thickness of 25 microns. ACP has excellent durability and weather ability and is resistant to extreme weather elements and industrial pollutions.

I. PHYSICAL PROPERTIES

ITEM	STANDARD
Panel Thickness	4 mm
Aluminum Cover Sheets thickness (Skin)	0.5 mm
Core	The thermoplastic core is LDPE
Panel Width	1220 mm
Panel Length	2440 mm
Panel Weight	5.5 kg /mm ²

17. Structural Glazing

Providing & fixing in position structural glazing system made of colour anodized frames confirming to 20 microns having mullions and transoms designed to withstand a wind pressure of 175kg/sqm The frame shall be fixed to the masonry/RCC work with necessary clamps, fastening strips ,nuts, bolts, rivets, washers and other fastening materials. All the panels to be assembled and glazed with DDC-995 or equivalent structural sealants. The spandrel panels made of 0.80mm thick GI sheet and 50mm thick glass wool having density of 48kg/sq.m shall be provided at every floor. All the panels shall be completely sealed with suitable silicon sealant and other standard accessories. The glass for all the structural glazing works shall be 6 mm thick ICE blue reflective heat strengthened glass Of Glaverbel make.

18. MODE OF MEASUREMENTS

a. Doors, Windows and Grills

- i. Clear area over one face inclusive of frame shall be measured. Holdfasts and portions embedded in masonry of flooring shall not be measured.

b. Partitions in Woodwork

- i. The partition height shall be measured up to bottom of false ceiling and framing members / ply going above shall not be measured.

c. Decorative Paneling over wall or over partitions

- i. The area of cladding shall be measured in square meter, or square feet. The gross area cladded will be measured. No deductions will be made for gaps up to one centimeter between the panels.

d. Paving and tile work

- i. The work mentioned in this section shall be measured in Sq. ft/ Sqm and shall be priced per unit of Sq. Ft/ Sqm In all paving work, the slabs shall be touching the walls and go well under the plaster, but the measurements shall be the clear measurements of the rooms or areas when finished. No allowance shall be made for portions going under plaster.

e. Wood work

- i. For conversion of inches to feet/cm to meter, the resultant figure shall be taken up to two Digits after decimal point. Third digit shall not be taken into account.

19. General Scope of Work

The requirement for the Indian Bank shall consist of the following,

- i. Civil / Plumbing Repairs
- ii. Interiors
- iii. Electrical work.

Sets of Working Drawing shall be submitted on award of Contract within seven days the proposed systems.

Guarantee and Warranty

Guarantee and Warranty for the supplies with respect to design, quality of materials used, workmanship and performance shall be covered for a period of 12 months from the date of handing over of the commissioned systems.

The Bidder shall also submit a bar Chart one for the supply of materials and the other for the execution of the work within seven days of the award of Contract.

The Bidder shall use the best engineering practice in the execution of this project and any such provisions to be made shall be brought to the notice of the Clients well in advance of the work being executed.

For water proofing work, the contractor has to submit the guarantee for 10 years.

APPROVED LIST MATERIALS FOR INTERIOR & CIVIL

<u>S.No.</u>	<u>Material</u>	<u>Approved Make</u>
1.	Ceramic tile	Nitco/ H &R Johnsons / Kajaria/ RAK
2.	Vitrified Ceramics	Nitco / RAK / H & R Johnsons / Kajaria
3.	Adhesive	Waber / Bal Endura / Fevicol/
4.	Door Closers / Floor	Dorma / Ozone / Hardwyn / Godrej
5.	Commercial Plywood	Green / Century / Monark / Samrat
6.	Water Resistant Plywood	Green / Century / Monark / Samrat
7.	Wood	BurmaTeakwood/ African Teakwood
8.	Paint Exterior	Asian / Berger/ Nerolac
9.	Paints Interior	Asian / Dulux / Nerolac / Berger
10.	Laminates	Greenlam / Merino / Royal Touché / Aica
	Sunmica / Century / Heritage or equivalent	
11.	Screws (Oxidized)	GKW / Nettlefold.
12.	Furniture Hardware	Efficient Gadgets /Ebco / Ozone / 4C
13.	Adhesive	Fevicol SH / Araldite / Makbond/Sika
	/Fosroc	
14.	Mortise Locks	Godrej / Ozone / Golden
15.	Wood Preservatives	Wood guard / Termisil
16.	Cement	Ultratech, A.C.C., Lafarge, Ambuja
17.	Door & Window Sections	Jindal / Indal
18.	Pre-laminated Particle Board	Green / Mario / Duratuff / Archid
19.	Melamine / French polish	Asian / Berger / ICI or Approved
	Equivalent	
20.	Plain and Tinted Glass	Saint Gobain / Asahi / Modi
21.	Mirror	Modiguard / Saint Gobain / Aasahi
22.	Hardware Fittings such as Hinges, knob Handle, Tower Bolts Castors etc.	SS: Garg/ Dorma / Ingersoll / Ozone
23.	Fire Retardant Flush Door	Uniply / Kutty / Sharon / Green
	19 mm ply/ block board	Uniply/ Greenply / Corbett/ Kit ply/ Century
	Kitchen SS fittings	Hetitch/ Blum/ Nice/Ebco/ Sterling /Kich SS +
	Synthetic Enamel Paint	Asian Paint. /Berger/Approved Equivalent
	Water Proofing	Sunanda, Pidilite, Roff Chemicals, BASF, Dr. Fixit, Berger
	PVC Drain Pipes	Prince / Supreme/Approved Equivalent

Note: preference of makes, supply of items should be consulted with Architect before effecting of supply.

SECTION 17: TECHNICAL SPECIFICATIONS FOR ELECTRICAL WORKS

SPECIAL CONDITIONS

1. General:

1.1 These special conditions shall be read in conjunction with the description of the item of work in the Bill(s) of Quantities, the particular Specifications, Local Statutory Regulations, Indian Standards Specifications/Codes and the drawings. All the above quoted documents, shall be considered supplementary to each other. However, in the case of conflict amongst the various provisions the owner's and the consultant's opinion will be final and shall be adopted.

1.2 The tenderer is advised to inspect the site to ascertain the nature of site, access thereto, local facilities for procurement of materials and working labour rates prevalent in the area, in fact all matters affecting his prices and execution of the work. The tenderer shall be deemed to have full knowledge of the site and drawings whether or not he actually inspects them.

2. Rates

2.1 The rates quoted shall be deemed to allow for all minor extras and constructional details which are not specifically shown on drawings or given on the specifications but are essential in the opinion of the Engineer-in-charge to the execution of works to conform to good workmanship and sound engineering practice. The Consultant/Employer reserves the right to make any minor changes during the execution without any extra payment.

2.2 The Consultants decision to clarify any item under minor changes, minor extras and constructional details shall be final, conclusive and binding on the Contractor.

2.3 The rates quoted by the Contractor shall be net so as to include all requirements described in the contract agreement and no claim whatsoever due to fluctuations in the price of material and labour will be entertained.

2.4 The rates quoted by the Contractor shall include for supplying materials and labour necessary for completing the work in the best and most workmanship like manner to the satisfaction of the Consultant/Employer and which in the opinion of the Consultant cannot be made better, and for maintaining the same. The rates shall be complete in all respects also including cost of materials, erection, fabrication, labour, supervision, tools and plant, transport, sales and other taxes royalties, duties and materials, contingencies, breakage, wastage, sundries, scaffoldings, etc., on the basis of works contract. The rates quoted shall include all taxes, duties, transport, insurance, octroi, or any other levies applicable under the statute.

3. Materials:

3.1 The Contractor shall ensure to the satisfaction of the Consultant/Employer that the materials are packed in original sealed containers/packing bearing manufacturer's markings and brands etc., except where the gross quantity required is a fraction of the smallest packings. Materials not complying with this requirement shall be rejected.

3.2 Testing of Materials:

a) When required by the Consultant, the Contractor shall provide all facilities at site or at manufacturer's works or in an approved laboratory for testing the materials and/or workmanship. All the expenditure in respect of this shall be borne by the Contractor unless specified otherwise in the Contract. The Contractor shall, when required to do so by the Consultant shall submit at his own cost, manufacturer's certificate of tests, proof sheets, mill sheets etc., showing that the materials have been tested in accordance with requirements of these specifications. The samples for Tests shall be selected by the Client/ Consultant.

4. Rectification of Defects:

4.1 Any defect in the work done or materials used in the works pointed out by the Consultant shall be rectified within a week or such extended time as may be allowed in this failing which the said defect shall be got rectified by the Consultant at the risk and cost of the Contractors.

5. Conduit and Cables Layout:

5.1 Prior to the pulling of wires, the Contractor shall verify the conduits laid at site by Civil Contractors and satisfy themselves about the adequacy of the same. The contractors shall prepare Wiring layout along with Conduit layout and submit for approval. Prior to laying of the cables, the Contractor shall submit to the Consultant detailed layout plans of the cable network and get the same approved. The layout plans shall contain particulars regarding size and routes of the cables. The Cables shall be procured only after approval of Layout Drawings.

6. Regulations & Standards:

6.1 The installation shall conform in all respects to Indian Standard Code of Practice for Electrical Wiring Installation IS:732 and IS:2274. It shall also be in conformity with the current Indian Electricity Rules and Regulations and requirements of the local Electric Supply Authority in so far as these become applicable to the installation. Wherever this specification calls for higher standard of material and/or workmanship than those required by any of the above regulations then this specification shall take precedence over the said regulations and standards.

7. Shop Drawings:

7.1 The Contractor shall prepare and submit to the Consultant for the approval of detailed fabrication drawings for Main LT Panels/SwitchGears/Rising Mains special boxes and Distribution Board, switch board, special any other equipment to be fabricated by Contractor within 60 days of signing of the contract.

8. Completion Drawings:

8.1 At the completion of the work and before issuance of certificate of virtual completion the contractor shall submit to the consultant/Employer layout drawings drawn at approved scale indicating the complete wiring system "As Installed". These drawings shall in particular, give the following information.

- (a) Run and size of conduits, inspection, junction and pull boxes.
- (b) Location and rating of sockets and switches, controlling the light and power outlets.

- (c) Number and size of conductors in each circuit.
- (d) Location and details of distribution boards, mains, switches, switchgear and other particulars.
- (e) A complete wiring diagram, as installed and schematic drawings showing all connections in the complete electrical system.
- (f) Location of telephone outlets, T.V. Music & Fire Alarm outlet boxes, junctions boxes, sizes of various conduits.
- (g) Locations of all earthing stations, routs and size of all earthing conductors, manholes etc.
- (h) Layout and particulars of all cables.

9. **Manufacturer's Instructions:**

9.1 Where manufacturers have furnished specific instructions, rating to the materials used in this job, covering points not specifically mentioned in the documents, these instructions shall be followed in all cases.

10. **Completion Certificate:**

10.1 On completion of the Electrical Installation a certificate shall be furnished by the Contractor counter signed by a licensed supervisor, under whose direct supervision the installation was carried out.

This certificate shall be in the prescribed form as required by the local supply authority. The Contractor shall be responsible for getting the drawings and Electrical Installation inspected and approved by the local Authority concerned.

11. **Qualified Competent Supervision:**

11.1 The Contractor shall employ competent fully licensed, qualified full time Engineer to direct the work of Electrical installation in accordance with drawings and specifications. The Engineer shall be available at all times on the site to receive instructions from Consultant in the day to day activities, throughout the duration of the contract. The foremen shall co-relate the progress of the work in conjunction with all relevant requirements of the supply authorities.

12. **Approval from MSEB / Electrical Inspectorate:**

The Contractor shall prepare and submit all the relevant drawings as per the Requirement of Electrical Inspectorate and obtain the Approvals from **MVVNL/UPPCL** and other related authorities. No incidental expenses will be paid towards the same. Only statutory fees if any will be paid by **INDIAN BANK**.

TECHNICAL SPECIFICATIONS

I) INTERNAL ELECTRIFICATION

1. Scope :

This specification is intended to cover the requirements of supply, installation, testing and commissioning of electrical wiring installation and other accessories required for its satisfactory operation. This covers the essential requirements or precautions regarding wiring installations for ensuring satisfactory and reliable service.

2. Standards:

The Electrical wiring installations and other accessories shall comply with latest IS: 732 - 1989 and National Electrical code - 1985.

3. Construction:

Wall mounted switch boards shall be installed such that the bottom is at a minimum height of

1.35 m above finished floor level wherever applicable, as indicated in the drawing.

Equipment which is on the front of a switch board shall be so arranged that inadvertent personnel contact with live parts is unlikely during the manipulation of switches, changing of fuses or similar operation.

In every case in which switches and fuses are fitted on the same pole, these fuses, shall be so arranged that the fuses are not live when their respective switches are in 'OFF' position.

No fuses other than fuses in instrument circuit shall be fixed on the back or behind a switch board panel or frame.

4. Capacity of circuit:

Lighting Circuits shall not have more than a total of ten points of fans, 5A socket outlets and light points and its total load shall not exceed 800 watts. Lights, fans, and 5A socket outlets can be wired on a single common circuit. If fan circuit is drawn separately, circuit shall not be used more than eight points and load shall not exceed more than 800 watts. In the circuit, the neutral and earth wires can be looped up to 10points. From distribution boards Neutral & Earth wires shall be run for every circuit.

The power circuits shall not have more than two outlets per circuit if load to be fed by each outlet is less than 1KW, and if load is more than 2KW, each outlet shall be connected to a separate circuit.

Switches : All switches shall be placed in the live conductor of the circuit and no single pole switch or fuse shall be inserted in the earth or earthed neutral conductor of the circuits. Single pole switches (other than for multiple control) carrying not more than 15amperes may be of the piano flush type and the switch shall be 'ON' When the knob is down.

Lamp holders : Lamp holders for use on brackets and the like shall have not less than 1.3 cm nipple and all those for use with flexible pendant shall be provided with cord grips. All lamp holders shall be provided with shade carriers. Where centre contact Edison screw lamp holders are used, the outer or screw contact shall be connected to the 'middle wire' or the neutral or to the earthed conductor of the circuit.

Lamps : All incandescent /LED lamps, unless otherwise specified shall be hung at a height of not less than 2.5 m above the finished floor level.

Ceiling rose : a) A ceiling rose or any other similar attachment shall not be used on circuit, the voltage of which normally exceeds 250 volts.

A ceiling rose shall not embody fuse terminals as an integral part of it.

Every socket outlet shall be controlled by a switch. The switch controlling the socket shall be on the 'live' side of side line. 5 Amps and 15 Amps socket-outlet shall normally be fixed at any convenient place 60 cm above the floor level or near such level as indicated in drawing. 15 Amps socket outlets in kitchen shall be fixed at convenient place 23cm above the working platform. In a room containing a fixed bath or shower, there shall be no socket outlet and there shall be no provision for connecting a portable appliance.

5. Recessed MS conduit wiring system:

- a) Making of chase : The chase in the wall shall neatly be made and shall be of suitable dimension to permit the conduit to be fixed in the manner desired by the Engineer-in-charge. In the case of buildings under construction, chases shall be provided in the wall, ceiling, etc. at the time of their construction and shall be filled up neatly after erection of conduit and brought to the original finish of the wall.
- b) Fixing of conduit in chase : The conduit shall be fixed by means of staples or by means of saddles not more than 600 mm apart. Fixing of standard bends or elbows shall be avoided as far as practicable and all curves maintained by bending the conduit pipe itself with a long radius which will permit easy drawing-in of conductors. All the threaded joints of rigid steel conduits shall be treated with approved preservative compound to ensure protection against rust.
- c) Inspection boxes : To permit periodical inspection and to facilitate replacement of wires, suitable inspection boxes shall be provided at convenient locations. They shall be mounted in flush with the wall. The minimum size of inspection boxes shall be 75 x 75 mm. Suitable ventilating holes shall be provided in the inspection box covers.
- d) Types of accessories to be used : All outlets, such as switches and sockets, may be either of flush mounting type or of surface mounting type.
- e) The switches and other outlets shall be mounted on such boxes. The metal box shall be efficiently earthed with the earth continuity wire run along the conduit.
- f) When crossing through expansion joints in buildings, the conduit sections across the joint may be through flexible copper bellows of the same size as PVC conduit. The Number of wires that can be drawn through a conduit shall be strictly as per IS 732 and as mentioned in Drawings.

6. MS Conduits:

- I. MS conduit shall be black enameled and of thickness not less than 16SWG and of size minimum 19 mm dia. The Conduit shall conform to IS 9537/ Part II
- II. **Bunching of cables** : Separate conduits shall be used for bunching of conductors of AC supply and DC supply for lighting and small power outlet circuits.
- III. **All outlets of conduit systems** shall be properly drained and ventilated, but in such a manner so as to prevent the entry of insects etc. as far as possible.
- IV. **Bends in conduit** : Wherever necessary, bends or diversions may be achieved by bending the conduits or by employing normal bends, inspection bends, inspection boxes, elbows or similar fittings.

- V. In case of plain conduit, heat may be used to soften the conduit for bending and forming joints. Positioning of conduit in close proximity to hot surfaces should be avoided.

7. Testing of wiring:

The following tests shall be carried out on all types of wiring on completion of the work & before energizing the installation:

- i) Insulation resistance test,
- ii) Electrical continuity test,
- iii) Earth continuity test,
- iv) Earth electrode resistance test,
- v) Switch polarity test.
- vi) Insulation Resistance test :

- i) Insulation resistance test,

The insulation resistance shall be measured by using 500 v megger between the following points.

Phase and neutral conductor with all fuses in position and all switches in closed condition and main switch in OFF position with lamps and other devices removed.

Between earth and whole system of conductors with all fuses in place, all switches closed and all lamps in position.

Between all conductors connected to one phase of the supply of the above tests shall not be less than 50 divided by the number of points on the circuit. Where a whole installation is being tested, a lower value than that given by the above formula is acceptable subject to a minimum of one megaohm.

The insulation resistance in megaohm as obtained by each of the above tests shall not be less than 50 divided by the number of points on the circuit. Where a whole installation is being tested, a lower value than that given by the above formula is acceptable subject to a minimum of one megaohm.

- (ii) Electrical continuity test :

Each and every circuit shall be tested for electrical continuity by using a multimeter.

- (iii) Earth continuity test :

The earth continuity conductor including metal conduit shall be tested for electrical continuity and the resistance of the same along with the earthing lead measured from the connection with the earth electrode to any point in the earth continuity conductor in the complete installation shall not exceed one ohm.

- iv) Earth electrode resistance test:

The earth electrode resistance shall be tested as specified in section.

(v). Switch polarity test :

Test shall be made to verify that all switches in every circuit have been fitted in the same conductor throughout and such conductor shall be marked for connection to the phase conductor.

8. Distribution Boards:

All the distribution boards shall be with MCBs as described in the respective schedule.

The distribution boards shall be controlled by a switch fuse, miniature circuit breaker or an isolator as described in the respective schedule. Each outgoing circuit shall be provided either with MCB or a fuse on the phase. The neutral shall be connected to a common link and be capable of being disconnected individually for testing purposes.

The distribution boards shall be located as indicated in the respective electrical working drawings and as directed by Engineer - in - charge. The distribution boards shall be fixed on wall in the niche provided and marked with the details of circuits, source of supply, size of incoming wires Etc.,

All marking shall be clear and legible.

The total load of the consuming devices shall be evenly distributed between the number of ways of distribution board.

The consuming devices circuit shall be connected to distribution board in proper sequence, so as to avoid unnecessary crossing of wires.

Cables shall be connected to a terminal only by crimped lugs.

Cables shall be rigidly fixed in such a manner that a clearance of at least 2.5cm is maintained between conductors of opposite polarity or phase and between the conductors and any material other than insulating material.

The incoming and outgoing cables shall be neatly bunched.

9. MOUNTING HEIGHTS :

The Mounting heights of various fixtures shall be as specified in the Drawings.

II) POWER CONTROL CENTRES.

1. Scope :

This specification is to cover the requirement of design, supply, installation, testing and commissioning of LT power control centres / main switch boards with all components, Instruments, fittings and accessories for efficient operation without any trouble.

2. Standards :

The PCC specified herein, unless otherwise stated shall conform to the relevant and latest revisions of Indian standards and Indian Electricity Rules.

3. Design and construction :

3.1 Design requirements : The power control centres shall be suitable for operation on 440volt, 3 phase,4wire 50HZ system to withstand a short circuit level of 50 KA RMS symmetrical.

The PCC shall be designed for operation in high ambient temperature up to 45 degrees centigrade and high humidity up to 95% and tropical atmospheric conditions. Means shall be provided to facilitate ease of inspection, Maintenance and Servicing.

3.2 Constructional requirements :

The power control centre shall be of

- I. Metal clad, cubicle, indoor, free standing type suitable for Mounting on Built up Trenches with U Channels of adequate size.
- II. Made up of the requisite vertical sections, which when coupled together shall form continuous dead front switch board.
- III. Dust and damp protected, the degree of protection shall be better than IP - 54 as specified in IS-2147.
- IV. Readily extendable on both sides by the addition of vertical sections after removal of the end covers.
- V. Single front construction with the circuit breaker feeder and switch fuse feeders suitable for operation from the front of the panel.

The PCC shall have the feeder ratings as per the schematic diagrams enclosed with the schedule and constructed only of materials capable of withstanding the mechanical, electrical and thermal stresses as well as the effects of humidity, which are likely to be encountered in normal service.

3.3 Vertical Sections :Each vertical section shall comprise a front framed structure rolled folded sheet steel channel section of minimum 2 mm thickness rigidly bolted together. This structure shall house the components contributing the major weight of the equipment such as circuit breaker, switch fuse units, main horizontal busbars, vertical risers and other front mounted accessories. The structure shall be mounted on a rigid base frame of folded sheet steel of minimum of 2.5 mm thickness and 100mm height. The design shall ensure Structural stability during Transit and also during Operation after Commissioning Suitable cable chamber housing the cable end connections and power / control cable terminations shall be provided. The design shall ensure generous availability of space for ease of installation and maintenance of cabling and adequate safety for working in one vertical section without coming into accidental contact with live parts in the adjacent section.

A cover plate at the top of the vertical section shall be provided with necessary ventilating arrangements. Any aperture for ventilation shall be covered with a perforated sheet having less than 1 mm diameter perforations to prevent entry of vermin.

3.4 Sheet Steel Cubicle :

3.4.1 The sheet steel cubicle shall be designed in fully segregated multitier formation. Each cubicle shall have hinged front access door with easy operating fasteners. All the doors and covers shall be heavily gasketed to make the compartment dust tight. Each cubicle shall have a covering at the bottom to make a dust and vermin proof construction. Door hinges shall be of concealed type.

The cubicle shall be of minimum 2 mm thick sheet steel. Sheet steel shrouds and partitions shall be of minimum 1.6 mm thickness. All sheet steel work forming the exterior of switch boards shall be smoothly finished, leveled and free from flaws. The corners shall be rounded. The minimum Thickness of Gland plates shall be 3mm.

3.4.2 The apparatus and circuits in the power control centers shall be so arranged as to facilitate their operation and maintenance at the same time to ensure the necessary degree of safety.

Apparatus forming part of the control centers shall have the following minimum clearance.

- i) between phases - 25 mm,
- ii) between phase and neutral - 25 mm,
- iii) between phases and earth - 25 mm,
- iv) Between neutral and earth - 19 mm,

When, for any reason, the above clearances are not available suitable insulation shall be provided. Clearance shall be maintained during normal service conditions. Creepage distances shall comply with those specified in relevant standards.

3.4.3 All insulating materials used in the construction of the equipment shall be non hygroscopic duly treated to withstand the effect of high humidity, high temperature and tropical ambient service conditions.

3.4.4 Functional units such as circuit breakers and fuse switches shall be arranged in multitier formation, except that not more than One air circuit breaker housed in a single vertical section.

3.4.5 Metallic/insulated barriers shall be provided within vertical sections and between adjacent sections to ensure prevention of accidental contact with :

- i) Main busbars and vertical risers during operation, inspection or maintenance of functional units and front connected accessories.
- ii) Cable terminations of one functional unit, when working on those of adjacent unit/units.

3.4.6. All doors / covers providing access to live power equipment / circuits shall be provided with tool operated fasteners to prevent unauthorized access.

3.4.7 Provisions shall be made for permanently earthing the frames and other metal parts of the switchgear by two independent connections.

3.5 Metal treatment and finish :

All steel works used in the construction of the switch boards shall have undergone a suitable rigorous metal treatment process so as to remove oxide scales and rust formation and to facilitate a durable coating of the paint on the metal surfaces and also to prevent the spreading of rust, in the event of the paint film being mechanically damaged.

Two coats of Anti Corrosive primer followed by a finishing coat of Epoxy spray power coating of the shade 631 of IS : 5 (i.e. Siemens grey) shall be given. The total thickness of paint shall not be less than 25 micron.

3.6 Bus Bars :

3.6.1 The busbars shall be housed in non-segregated sheet steel compartments in the cubicle at convenient locations with provision for access to the buses from the front of the panel. The busbar shall be suitably braced with DMC/SMC supports to provide a through fault withstand capacity of 50 KA RMS symmetrical for one second and a peak short circuit withstand capacity 150 KA minimum. The neutral as well as the earth bus shall be capable of withstanding the above fault level.

3.6.3 Large clearance and creeping distance shall be provided on the busbar system to minimize the possibility of a fault.

3.6.4 High tension bolts, nuts and spring washers shall be provided at all busbar joints.

3.6.5 The continuous rating of the busbar shall be 125% of the rated current. Maximum temperature of the bus and the connections shall not exceed 85 degrees centigrade. The busbars shall be of liberal design for the required current rating i.e. 0.8Amp/sq.mm.

The main phase busbars shall have continuous current rating throughout the length of each power control centre and the neutral busbars shall have continuous rating of at least 50% of phase busbars.

3.6.6 Connections from the main busbars to functional circuits shall be arranged and supported so as to withstand without any damage or deformation, the thermal and dynamic stresses due to short circuit currents.

All busbars and tapings shall be provided with color coded sleeves for phase identification.

All joints/tapping points of the buses shall be suitably shrouded to prevent accidental contact.

4. Circuit Breakers :

4.1 General :

4.1.1 Circuit breakers shall be of triple pole / four pole, air break, horizontal draw out /Fixed type, as given in the schedule of work and comply with the requirements of relevant IS with latest amendments and shall have the following :

- i) A short circuit breaking capacity of not less than 50 KA RMS at 415 volts, 50 Hz AC.
- ii) A short circuit making capacity of 105 KA.
- iii) A short time withstand capacity of 150 KA for one second.
- iv) Electrical overload performance at 6 times the rated current, 100% of the rated voltage as recovery voltage at 0.5 power factor.
- v) Dielectric test of 2.5 KV applied for one minute on main circuits.

4.1.2 The circuit breakers shall be fitted with detachable arc chutes on each pole designed to permit rapid dispersion, cooling and extinction of the arc. Interphase barriers shall be provided to prevent flash over between phases.

4.1.3 Arcing contacts shall be of hard wearing material copper tungsten or silver

tungsten and shall be easily replaceable. Main contacts shall be of silver plated copper of high pressure type and generous cross section.

4.2 Operating Mechanism :

The operating mechanism shall be of robust design, with minimum number of linkages to ensure maximum reliability. Manually operated circuit breakers shall be provided with spring operated closing mechanism which are independent of speed of manual operation. Electrically shall be independent of the motor which shall be used slowly for charging the closing spring.

The operating mechanism shall be such that the breaker is at all times free to open immediately when the trip coil is energized.

Mechanical operation indicators shall be provided to show open and close positions of the breaker. Electrically operated breakers shall be additionally provided with mechanical indications to show charged and discharged conditions of the charging spring.

Means shall be provided for slow closing and opening of the breaker for maintenance purposes, and for manual changing and closing of electrically operated breakers during emergencies,

4.3 Protection :

Provisions shall be available for fitting a minimum of five trip devices - three over current, as shunt trip and an under voltage release or two over current and earth fault release, a shunt trip and one under voltage release. The breakers shall be of the shunt or series trip type as specified in the schedule.

4.4 Housing of Circuit Breaker :

Circuit breakers shall be individually housed in sheet metal castle provided with hinged doors. The breaker along with its operating mechanism shall be mounted on a robust carriage moving on guide rollers within the castle. Isolating contacts for both power and control circuits shall be of robust design and fully self aligning. The assembly shall be designed to allow smooth and easy movement of the breakers within its castle.

The breaker shall have three distinct positions within the castle as follows :

- i) `Service' position : With main and auxiliary contacts connected.
- ii) `Test' position : with power contacts fully disconnected and control circuit contacts connected.
- iii) `Isolated' position : with both power and control circuit contacts fully disconnected.

It shall be possible to achieve any of the above positions with the castle doors closed. Mechanical position indicators shall be provided for the three positions of the breakers.

4.5 Interlocking :

4.5.1. The moving portion of the circuit breaker shall be interlocked so that :

- i) It shall not be possible either to isolate it from the connected position, or to plug it in from the Isolated position with the breaker closed.
- ii) The circuit breaker can be closed only when it is in one of the three positions or when it is fully out of the castle.
- iii) It shall not be possible to open the hinged door of the castle unless the breaker is drawn to the isolated position.

iv) Inadvertent with drawl of the circuit breaker too far beyond the supporters is prevented by the suitable stops.

4.5.2 Provisions shall be available for the padlocking of the circuit breaker access flame in any of the three positions.

4.5.3 Automatically operated safety shutters shall be provided to screen the fixed isolating contacts when the breaker is drawn out from the castle.

4.5.4 The moving portion of the circuit breaker shall be provided with a heavy duty, self aligning earth contact, which shall make before and break after the main isolating contacts during insertion into with drawl from the service position of the breaker. Even in the isolated position positive earthing contact should exist.

4.5.5 Auxiliary switches directly operated by the breaker operating mechanism and having 4 `NO' and 4 `NC' contacts, shall be provided on each breaker. The auxiliary switch contacts shall have a minimum rated thermal current of 10 amps.

5. Switch Fuse Units :

5.1 General :

The switch fuse units shall be of the load break, heavy duty, cubicle type conforming to the requirements IS and of AC 23 duty.

The switch fuse units shall be capable of withstanding the thermal and electromagnetic stresses caused by short circuits for the time of operation of the associated fuse links.

The switch fuse units shall be double break and have quick make break mechanism, designed to ensure positive operation.

All switch fuse contacts shall be silver plated at the current transfer surfaces.

The unit shall be provided with a front operating handle. The ON and OFF positions of the switch handle shall be clearly marked.

5.2 Interlocks and Safety :

Interlocks shall be provided so as to prevent opening of the unit door when the switch is in the ON position and also to prevent closing of the switch with the door not properly secured. It should however be possible for a competent person to operate the switch shall be suitable for locking with switch in the OFF position by means of a padlock.

The interior arrangement of the switch fuse unit shall be such that all 'Live' parts are shrouded.

5.3 HRC Fuses :

The switch fuse units shall be fitted with High rupturing capacity cartridge fuse links with ISI marking for a rupturing capacity of not less than 80 KA at 415 volts. The fuse links shall be mounted in a drawout carriage, thus ensuring positive isolation of contacts during fuse replacements.

6. Current Transformers.

Current transformers shall comply with the requirements of relevant latest amendment IS. They shall have ratios, outputs and accuracy as specified in the schedule.

7.0 Indicating / Integrating Meters :

All indicating instruments shall be of flush mounted industrial pattern conforming to the relevant latest amended IS. The instrument shall have nonreflecting bezels, clearly, divided and indelibly marked scales, and shall be provided with zero adjusting devices in the front. Integrating instruments shall be of flush mounted switch board pattern complying with the requirements of relevant latest IS.

8. Relays: Circuit breakers shall be provided with integrally mounted relays as specified in the schedule.

The relay shall have a set of three phase characteristics, which shall be adjustable over a wide range, to provide discrimination between a multiplicity of devices. The relay shall be able to provide over current and earth fault protection. Also UV and Shunt Trip Relays are to be provided.

9. Control switches/Selector switches: Control switches/Selector switches shall be of the heavy duty rotary type, with plates clearly marked to show the operating position. They shall be of semi-flush mounted type with only the front plate and the operating handle projected.

Circuit breakers control switches shall be of the spring return to neutral type.

10. Indicating lamps and push buttons:

Indicating lamps shall be of the LED type of low watt consumption, provided with series resistors where necessary and with translucent lamp covers. Bulbs and lenses shall be easily replaceable from the front.

Push buttons shall be of the momentary contact, push to actuate type fitted with self-reset contacts and provided with plates marked with its junctions.

11. Cable terminations:

Cable entries and terminals shall be provided in the switch board to suit the number, type and size of aluminum conductor power cables and copper conductor control cables as indicated in the schematic diagram.

Provision shall be made for top or bottom entry of cables as required. Generous size of cabling chambers shall be provided, with the position of cable glands and terminals such that cables can be easily and safely terminated.

Barriers or shrouds shall be provided to permit safe working at the terminals of one circuit without accidentally touching that of another live circuit.

Cable riser shall be adequately supported to withstand the effects of rated short circuit currents without damage and without causing secondary faults.

Cable sockets shall be of copper and of the crimping type/soldering as required.

12. Control wiring:

All control wiring shall be carried out with 1100/650 V grade single core Copper cable conforming to relevant IS having stranded copper conductors of minimum 2.5 sq.mm. section for CT Wiring and 1. 5sq.mm for Control/indicating Instruments.

Wiring shall be neatly bunched, adequately supported and properly routed to allow easy access and maintenance.

Wires shall be identified by numbered ferrules at each end. The ferrules shall be of the ring type of non-deteriorating material. They shall be firmly located on each wire so as to prevent free movement.

All control circuit fuses shall be mounted in front of the panel and shall be easily accessible.

13. Terminal blocks and labels:

Terminal block shall be of 500 volts grade of the stud type. Insulating barriers shall be provided between adjacent terminals.

Terminal block shall have minimum current rating of 10 amps and shall be shrouded. Provisions shall be made for label inscriptions.

Labels shall be made of anodized aluminum, with white engraving on black background. They shall be properly secured with fasteners. Danger plate of size and descriptions as recommended in the relevant IS shall be provided on the PCC.

14. Tests:

- I. The power control centre shall be completely assembled, wired, adjusted and tested for operation under simulated conditions to ensure correctness of wiring and interlocking and proper functioning of all components.
- II. Each power control centre and components shall be subjected to standard routine tests as per applicable clauses of relevant standards.
- III. All current carrying parts and wiring of power control centre shall be subjected to power frequency voltage withstand test.

15. Drawings:

After the award of the contract the contractors shall submit three copies of the following drawings for approval of the Department.

- 1) Outline dimensional drawing of the PCC showing the general arrangement indicating the following:
 - i) Bus bar clearances;
 - ii) power and control cable entry points;
 - iii) Configuration of bus bars;
 - iv) Details of support insulations and spacing's;
 - v) Outgoing power cable termination arrangements.
- 2) Single line diagram of power control centre showing Protection, Metering etc.
- 3) Cubicle wiring diagram.
- 4) List of Firemen's with Ratings & makes / Models

16. Installation Testing and commissioning:

The power control centre shall be installed over the cable trench/cable pit using suitable size of MS channel including grouting of the channel with necessary bolts and nuts. Proper earthing of PCC shall be done using two independent copper/GI strip of sizes as indicated in the schedule. The channel shall be painted with one coat of red oxide primer and two coats of anticorrosive enamel paint of proper shade as directed by the Engineer-in-charge. The pre-commissioning tests as required shall be done and the PCC shall be commissioned.

III) LAYING OF CABLES**1. Scope:**

This specification is intended to cover the requirements of installation and energizing of PVC/XLPE/PILCDSTA power cables including jointing of cables.

2. Standards:

The power cable and its fixing accessories shall comply with the latest relevant Indian Standards and National Electrical Code.

3. Laying of Cables:**3.1 General:**

Before the commencement of cable laying, it shall be ensured by the Engineer-in-Charge that only ISI marked cables are used. It shall be the responsibility of the contractor to check the soundness and correctness of the size of the cable while taking delivery of the cable from stores. Any defect noticed shall be brought to the notice of the issuing authorities immediately. If any defects are noticed after the cable is laid or during the process of laying, it shall be brought to the notice of the Engineer-in-Charge and upon his satisfaction, that the cable is not damaged due to bad handling, it will be the entire responsibility of the contractor to retrieve the cable already laid and return the defective cable to store and take fresh length of the cable from the store and relay the same.

- i. The material such as bricks, sand, cable route markers, RCC slab of best quality as approved by the Engineer-in-Charge only shall be used for cable laying works.
- ii. The contractor shall provide all the necessary labour, tools, plants and other requisites at his own cost for carrying out pumping of water and removing of water from trenches, if any, where required.
- iii. Installation shall be carried out in a neat, workman like manner by skilled, experienced and competent workman in accordance with standard practices.
- iv. While laying the cable care shall be taken to avoid formation of kinks and also damage to the cable. In the case of cable bends, it shall not have bent radius lesser than 20 times the overall diameter of the cable.
- v. A cable loop of about five meters' length and as directed by the Engineer-in-Charge shall be provided at the following locations.
 - a) Near the termination points
 - b) Near to the straight through joint
 - c)

- vi. The method of cable laying and routing of cables, shall in every case be as directed by the Engineer-in-Charge / consultant.
- vii. Whenever cable passes through home pipes/GI pipes embedded across the wall in a building, both the ends of the pipe shall be suitably sealed.
- viii. Identification tags indicating the size of the cable and feeder designation shall be securely attached at both ends of the cable. Such tags shall also be attached to the cable at intervals of 50 Mtrs. The materials of the tag shall be of either 12 SWG GI sheet. In case of plastic, the details have to be engraved and in case of GI sheet, the details should be punched. Cable route markers shall be provided at the intervals of 200 M with a minimum of one number route marker. The details of the route markers shall be as per the drawing. At the locations of straight through joints, necessary joint-markers shall be provided.
- ix. When cable runs vertically, it shall be clamped on mild steel flats or angle iron fixed on walls and are spaced at such intervals as to prevent buckling of the cables. All steel work shall be painted with a coat of red oxide and thereafter finished with suitable anticorrosive paints.

3.2 Cable laid in ground:

- i. All MV cables (up to 1.1 KV) shall be laid at a minimum depth of 0.75 M & HT cables (1.1 KV to 11 KV) shall be laid at a depth of 1.0 M when laid in ground. When cable pass through roads, mullahs etc. they must be protected by either home pipe or GI pipe of suitable dimensions.
- ii. Excavations of trenches shall be carried out as indicated in the drawing. The width of the trench at the bottom shall be 0.4 M for one cable. In case the total number of cables laid in trenches is more than one, then the width shall be such that the spacing between the cables is maintained as shown in the drawing. Before the cable is laid in the trench the bottom of the trench shall be cleared from stones and other sharp materials and filled with sand layers of 75 mm, as shown in the drawing.
- iii. While removing the cable from the drum, it shall be ensured that the cable drum is supported on suitable jacks and the drum is rotated to unwind the cable from the drum. The cable should never be pulled while unwinding from the drum. It shall be ensured that the cables are run over the wooden rollers placed in the trench at intervals not exceeding 2 M.
- iv. After placing the cables in the trench shall be filled in layers ensuring that each layer is well rammed by spraying water and consolidated. The extra earth shall be removed from the place of trench and deposited at a place as directed by the Engineer-in-Charge/consultant.
- v. The HT cables shall be provided with RCC slabs (marked HT cable) on top as protection.

3.3 Cables laid in built up trench:

Before the commencement of cable laying the cable trench shall be drained properly. Cable shall be laid as explained in item 3.2. Cable shall be properly clamped to the cable supports, which are provided in the cable trench. The method of clamping shall suit the size of the cable and the cable supports, which are provided in the cable trench. The method of clamping shall suit the size of the cable and the cable supports, as directed by the Engineer-in- Charge.

Care shall be taken while removing and replacing the trench cover slab. It is the responsibility of the contractor to make good any damaged trench covers.

3.4. Cable terminations and straight through joints:

- i. All cable jointing materials such as straight through joint boxes, cable compound, cable lugs, insulation tapes etc. shall be of best quality and as approved by the Engineer-in-Charge.
- ii. Cable glands for strip / armored cables shall include a suitable armor clamp for receiving and securely attaching the armoring of the cable in a manner such that no movement of the armour occurs when the assembly is subjected to tension forces.
- iii. The cable gland shall not impose on the armoring, a bending radius not less than the diameter of the cable. The clamping ring shall be solid and of adequate strength.
- iv. Provision shall be made for attachment of an external earthing bond between the metallic covering of the cable and the metallic structure of the apparatus to which the cable box is attached.

3.5 Sealing boxes :

A sealing box, irrespective of the class of insulation of the cable for which it is intended, shall be so designed that it may be filled with compound after connecting the cable specially in flame proof/hazardous areas.

All parts and connection for attaching the armoring, wiping or clamping the metallic sheath in a sealing box, shall be easily accessible. This may be achieved by splitting the box or by providing a suitable cover or other such means.

I. The joints in the box shall prevent leakage of the compound.

- i. Provision shall be made to ensure that the cores of the cable are efficiently sealed to prevent moisture penetrating along the strands or the cable conductors.
- ii. The sealing box shall be provided with compound filling orifices with suitable covers or plugs of size that will permit easy pouring of the compound.
- iii. In all cases where screwed plugs are used, one or more air vents shall be provided to ensure complete expulsion of air and total filling of the box with compound.3.5.6 The box shall be of sufficient length to allow for manipulation of the insulated cover without damage to them or to the insulation.
- iv. A sealing box intended to be attached directly to the apparatus shall be

designed such that the box together with the connected cable may be detached from the apparatus without disturbing the sealing compound.

- v. Cable sealing and dividing boxes intended for use in the flame proof areas shall comply additionally with the relevant requirements of IS:2148-1968.

4. Testing

Once cable is laid, following tests shall be conducted in the presence of Engineer-in-Charge, before energizing the cable:

- i) Insulation resistance test (Sectional and Overall).
- ii) Sheathing continuity test.
- iii) Continuity and conductor resistance test.
- iv) Earth test.
- v) High voltage test.

Tests conducted shall be as per Indian Standards and National Electrical Code.

IV) EARTHING

1. SCOPE:

This specification is intended to cover the requirements of supply, installation, testing and commissioning of

- a) Pipe earthing
- b) Plate earthing
- c) Strip earthing

2. STANDARDS:

Earthing installations shall conform to the Indian Electricity Rules - 1956, as amended from time to time and IS 3043-1989 "code of practice for earthing", with latest amendments.

3. Earth electrode arrangement:

3.1 Pipe electrode :

3.1.1 Electrode shall be made of CI pipe having a clean surface and not covered with paint, enamel or poorly conducting material. Galvanized pipe shall not be smaller than 100 mm ID. Earthing with pipe electrode shall be done as per the details indicated in IS : 3043/87 .

3.1.2 Electrodes shall be embedded below permanent moisture level.

3.1.3 The length of pipe electrodes shall not be less than 2.5 m. if rock is encountered, pipes shall be driven to a depth of not less than 2.5 m with suitable inclination. Pipe shall be in one piece and deeply driven.

3.1.4 To reduce the depth of burial of an electrode without increasing the resistance, a number of rods or pipes may have to be connected together in parallel. The distance between two electrodes in such a case shall not be less than twice the length of the electrode. The earthing lead shall be connected by means of a through bolt, nuts and washers and cable socket.

3.2 Plate electrode :

For plate electrodes, minimum dimensions of the electrode shall be as under.

3.2.1 GI plate electrode : 600 x 600 x 6 mm thick.

3.2.2 Copper plate electrode : 600 x 600 x 3.15 mm thick

3.2.3 The electrode shall be buried in ground, with its faces vertical and top not less than 2.5 M from the surface of the ground.

3.2.4 Earthing using plate electrode shall be done as per details, indicated in drawing.

3.2.5 Plate electrodes shall have a galvanized iron water pipe, buried vertically and adjacent to the electrode. One end of pipe shall be at least 5 cm above the surface of the ground and need not be more than 10 cm. The internal diameter of the pipe shall be at least 19 mm. The length of pipe under the earth's surface shall be such that it shall be able to reach the center of the plate. The earthing lead shall be securely bolted the plate with two bolts, nuts, check nuts and washers.

3.3. Strip or conductor electrodes :

3.3.1. Strip electrode shall not be smaller than 25 x 1.6 mm, if of copper and 25 x 3 mm, if of galvanized iron and steel. If round conductors are used as earth electrodes, their cross sectional area shall not be smaller than 3 sq.mm , if of copper and 6 sq.mm. if galvanized iron and steel.

3.3.2. Conductor shall be buried in trenches not less than 0.5 m deep.

4. General :

i) All materials used for connecting the earth lead with electrode shall be of GI in case of GI pipe and GI plate electrodes, and of tinned brass in case of copper plate electrode. The earthing lead shall be securely connected at the other end to the main board.

ii) The earthing lead from electrode onwards shall be suitably protected against mechanical injury by routing the earth wire / strip through a suitable size of GI pipe.

iii) All medium voltage equipment's shall be earthed by two separate and distinct connections with the earth. In the case of high and extra high voltages, the neutral points shall be earthed by not less than two separate and distinct connections with the earth, each having its own electrode at the generating station or substation.

iv) All materials, fittings etc. used in earthing shall conform to Indian standard specifications wherever they exist. In the case of materials for which Indian standard specifications do not exist, such materials shall be approved by the Engineer-in-Charge.

- v) The earth electrode shall be kept free from paint, enamel and grease.
 - vi) It shall be ensured that similar materials for respective earth electrodes and earth conductors are used.
 - vii) Earth electrode shall not be installed in proximity to a metal fence.
 - viii) Copper/GI strip shall be connected to the respective earth electrodes, either by brazing or welding respectively. The Copper/GI strip shall be jointed only either by brazing or by riveting at the end of over lapping portions. The overlap shall not be less than 50 mm.
 - ix) Earthing clamps used for supporting earth strips shall be made of such materials so as to avoid bimetallic action between strip and clamps.

5. Testing:

The earth resistance of each electrode shall be measured by using a reliable and calibrated earth megger and the value shall be as per IS/IE rules

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

S.No	Material Name.	Brand / Manufacturer / Recommended Make.
1	Switches/Sockets	Hager / Schneider / Legrand
2	Copper Conductor wires	Finolex / Qflex/ Lapp/ Anchor
3	PVC conduits & Accessories	Precision / Sudhakar/ Avon plast
4.	MS Conduits	Gupta / Bharat
5.	Metal clad Sockets	MDS /L&T- Hager /Merlengerin /BCH
6.	MCBs /MCB Distribution boards	MDS /L&T- Hager /Merlengerin(Compact)
7.	MCCBs/Switchgear	GE Power /Merlengerin (Compact)/ BCH/L&T /MD
8.	Underground Cables	CCI /Unistar /Nicco /Gloster
9.	Cable Glands	HMI /Comet
10.	Capacitor Bank	Epcos /Neptune
11.	Cable Lugs	Dowell's / 3D
12.	MV Panels (PCCs)	Manufacturers with CPRI Test Certificate.
13.	ELRs/CBCT	Prokdvs /Nagoba
14.	Measuring Instruments	Prokdvs /Enercon
15.	Selector Switches	Vaishno / Salzer / Kaycee
16.	Indication Lamps LED (protected type)	Schneider / Vaishno / Binay
17.	Resign cast CTs	AE / Kappa
18.	Telephone Wires	Lapp / Delton /National
19.	Light Fixtures	Wipro/ Osram / Philips / Havells
20.	Ceiling Fans & Exhaust Fans	CG/ Usha / Bajaj

NOTE:

- i. Unless otherwise mentioned any one of the approved makes or brands shall be allowed to be used. Other specific equivalent brands with BIS mark may be allowed to be used if approved by INDIAN BANK.
- ii. **The bidder shall distinctly understand** that it will not be their prerogative to insist on a particular brand from the list. Final selection will be done with the approval of INDIAN BANK.
- iii. If the schedule of quantities prescribes a particular brand of materials or fittings, the same shall be considered while quoting the rates.
- iv. Samples of every material including all fixing accessories shall be got approved by INDIAN BANK before Execution.

Sign and Stamp of the contractor

SECTION 18 :TECHNICAL SPECIFICATION FOR AIR CONDITIONING WORK

DUCT WORK AND OUTLETS

1. General :

- a. The Work under this part shall consist of furnishing labour materials, equipment and appliance as specified necessary and required to install all sheet metal and other allied work, to make the air cooling supply, ventilation and exhaust system ready for operation as per drawings.
- b. Except as otherwise specified, all duct work and related items shall be in accordance with these specifications.
- c. Duct work shall mean all ducts, casings, dampers, access doors, joints stiffeners and hangers.

2. Duct Materials:

- a. The Ducts shall be fabricated from galvanized steel sheets class IV conforming to ISS : 277-1962 (revised) or aluminum sheets conforming to ISS:737-1955 (Wherever aluminum ducts are specified)
- b. All duct work, sheet metal thickness and fabrication, unless otherwise directed, shall strictly meet the requirements, as described in IS:655-1963 with amendment -I (1971 edition)
- c. The Gauges, Joints and Bracings for sheet metal duct work, shall further conform with the provisions as shown on the drawings.
- d. Ducts larger than 450mm shall be cross broken, duct sections upto 1200 mm length may be used, with bracing angle omitted.
- e. Changes in section duct of work shall be affected by tapering the ducts with as long taper as possible. All branches shall be taken off at not more than 45 deg. angle from the axis of the main duct, unless otherwise approve by the engineer-in-charge.
- f. All ducts shall be supported from the structural/RCC slab by means of MS rods of 9mm (3/8") dia, with MS angle at the bottom as per requirements of engineer-in-charge.

INSTALLATION:

- a. During the construction, the contractor temporarily close duct openings with sheet metal covers, to prevent debris entering to the ducts and to maintain the opening, straight and square, as per the direction of engineer-in-charge.
- b. Great care should take to ensure that, the duct work does not extend outside and beyond the height limits as noted in the drawings.
- c. All duct work shall be of high quality approved galvanized sheet steel, guaranteed not to crack or peel on bending or fabrication of ducts and all joints should be tight and smooth.

- d. All air turns of 45 Degrees or more shall include curved metal blades or vanes arranged so as to permit the air to make abrupt turns, without an appreciable turbulences. turning vanes shall be securely fastened to prevent noise or vibration. All ducts shall be fabricated
- e. and installed in accordance with modern design practice. the sheet metal gauges and fabrications procedures as given in IS specifications, shall be considered as an integral part of these specifications.
- f. The duct work shall be varied in shape and position, to fit actual conditions in the building. all changes shall be in accordance with accepted air-cooling duct design subject to the approval the engineer-in-charge. The contractor shall also verify all measurements in the building and shall notify to the engineer in-charge of any difficulty in carrying out his work before fabrication.
- g. Sponge rubber of approved equal gaskets shall be installed between duct flanges as well as between all connections of sheet metal ducts to walls, floor columns, heater casings and filter casing. Sheet metal connections shall be made to wall and floors, by means of galvanized
- h. steel angles anchored to the building structure with anchor bolts and with the sheet bolted to the angles. sheet metal connections shall be as shown in the false ceiling/boxing or supports grouted in the wall.
- i. Flanges and supports are to be black, mild steel and are to be primer coated on all surfaces, before erection and painted with aluminum thereafter. Accessories such as damper blades and access panels, are to be of materials of appropriate thickness & the finish, similar to the adjacent ducting as specified.
- j. Joints, seems, sleeves, splitters, branches, take off and supports are to be as per duct details specified or as decided by the engineer-in-charge.
- k. Joints requiring bolting or riveting, may be fixed by hexagonal nuts and bolts, stove bolts and buck bolts, rivets or closed center top rivets or spot welding, self-tapping screws must not be used. All fixing must have a permanently non-corrosive finish such as cadmium
- l. plating or galvanizing, whichever is appropriate. Spot welds and bronze welds are to be coated on all surfaces with zin.
- m. The flexible joints are to be fitted to the suction and delivery of all fans. The material is to be normally double heavy canvas or as directed by the engineer-in-charge. On all circular spigots the flexible materials are to be screwed or clipboard with adjustable screws or toggle fittings. For rectangular ducts flat or bolted to making flange with backing flat.
- n. The flexible joints are to be not less than 75mm and not more than 250mm between faces.
- o. The duct work should be carried out in a manner and at such a time as not to hinder or delay the work of the other agencies especially the false ceiling contractors.
- p. At the junction of such branch duct with main duct and split of main duct, volume dampers shall be of an approved type, lever operated and complete with locking devices, that will permit the damper to be adjusted and locked in any positions.

- q. The dampers shall be of splitter, butterfly or louver type. the damper blade shall be not less than 1.25mm (18 gauge) reinforced with 25mm angles, 3mm thick along any unsupported side longer than 250mm angles, shall not interfere with the operation of damper, nor cause any turbulence.
- r. Automatic and manual volume apposed blade diffusers, shall be complete with frames and bronze bearings as per drawings. Dampers and frames shall be constructed of 1.5mm steel & Blades shall not be over 225mm wide.

ACCESS PANEL

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

MISCELLANEOUS:

- a. All ducts above 450mm are to be cross broken, to provide rigidity to the ducts.
- b. All duct work joints are to be true right angle or approaching with all sharp edges removed.
- c. Sponge rubber gaskets also should be provided behind the flange of all grilles.
- d. Each shoot from the duct, leading to a damper, shall be provided with an air deflector to divert the air into the diffuser through the shoot.
- e. Inspection doors measuring at least 450x 450mm are to be provided in each system, at an appropriate location, as directed by the engineer-in-charge.
- f. Diverting vanes must be provided at the bends exceeding 600mm and at branches connected into the main duct, without neck.
- g. Proper hangers and supports should be provided to hold the ducts rigidly, to keep them straight & to avoid vibrations. Additional supports are to be provided where required, for rigidity or directed by the engineer in-charge.
- h. The ducts should be supported by approved type supports at a distance not exceeding 2.4 meters.
- i. Sheet Metal connection pieces, partitions and plenums required, shall be constructed of 1.25mm (18 Gauge) sheet thoroughly stiffened with 25mm x 25mm angle iron braces and fitted with access doors.

Grilles/diffusers:

- a. The Supply air diffusers shall be fabricated from MS/AL sections. The grille shall have horizontal extruded section fixed louvers.
- b. The Diffusers shall have opposed blade dampers of MS/AL which shall be key operated from the grille face, wherever required.
- c. The damper blades shall be of 1.25mm (18 Gauge) Al/MS Black sheets and shaped to form airtight joints. The frame work for dampers shall be fabricated from 1.25mm

(18 Gauge) Al/MS Black sheet. the grille frame shall be fabricated from extruded aluminum angle. Grilles longer than 450mm, Shall have intermediate supports for the horizontal louvers. the grilles shall generally be to the design of Tuttle & baley grilles and registers.

PAINTING

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

TESTING:

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

INSULATION

GENERAL:

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

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

ACOUSTIC LINING

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

INSTALLATION:

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

DUCT THERMAL INSULATION. EXTERNAL

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

ROOF INSULATION

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

REFRIGERANT PIPING

- a. The specifications that follow cover the requirements of piping.
- b. Only copper piping/tubing of refrigeration quality shall be used. Soft copper tubing can be employed for sizes up to and including 22mm (7/8") OD and 9.5mm (3/8") OD shall have a minimum nominal thickness of 0.76mm (0.030") and 0.81mm (0.032") respectively.
- c. All piping / tubing shall be new fresh, clean and dry.
- d. Fittings like bends, tees, sockets, etc. shall be of copper or forged brass. Flare type fittings may used for copper tubing while hard drawn tubes upto and including 15mm size may be bent to from 90 Deg bends with throat radius being not less than 3 times the tube diameter. for bigger sizes, bends should be used as noted already.

- e. Valves for pipe sizes up to 15mm OD shall be all brass, hand wheel operated, Diaphragm pack less type, globe or angle valves, for sizes over 15mm OD Valves shall be of bronze, globe or angle type, packed back sealed.
- f. Liquid line strainers shall be made of brass shall incorporate bronze screen and permanent management. Strainers shall be provided with shut valves on either side.
- g. Thermostatic expansion valve shall be complete with remote bulb and external equalizer and external super head adjustment. Solenoid valves shall have manual opening system to serve as by - pass in case of failure of solenoid valve. Liquid-moisture indicator shall be
- h. Provided in the liquid line.
- i. Flare type joints may be used for copper tubing while for a hard drawn pipe only brazed joints shall be used. For Small lines also such as equalizer lines, expansion valves connections, gauge connections, connecting pressure switches etc., Flared fittings and joints shall be used.
- j. Piping shall be insulated sufficient number of bends and turns to ensure sufficient fleetly and minimize vibration. Supports, Clamps, Saddles, hangers etc., of adequate strength should be provided as required to support the piping adequately and minimize vibration.
- k. Necessary isolating material like rubber, felt, spring, etc., should also be provided as an additional measure to limit transmission of noise and vibration.
- l. Refrigerant piping shall be carried out giving due consideration to the need to ensure oil return and avoid liquid slope-over into the compressor, Accordingly, the piping shall include necessary loops, traps, slopes, etc., to achieve these objectives.
- m. While installing the piping, adequate clearance between pipes should be provided for insulation is called for
- n. On completing the erection, the system shall be pressure tested with dry nitrogen or carbon de-oxide. The test pressure shall be a sunder for R-22.
- o. High Pressure side - kg /sqcm(psi) : 25 (365)
- p. Low Pressure side - kg /sqcm(psi) : 110 (150)
- q. The system shall hold the pressure for a minimum period of 24 hours without revealing leaks.
- r. After the leak test has been completed successfully, the pressure due to Nitrogen or Carbon- de-oxide in the system.
- s. The System shall then be dehydrated by drawing a vacuum. The vacuum achieved shall be atleast as deep as 500 microns and shall be maintained for a period of atleast 24 Hours after the vacuum pump has been shut off.

INSULATION FOR REFRIGERANT PIPING:

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

CONDENSATE DRAIN PIPING:

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

APPROVED MAKES FOR HVAC SYSTEMS

The Contractor shall have to obtain Consultant's approval of all makes of equipment and technical selection prior to ordering and installation.

List of makes agreed during Tender negotiations supersedes all mentioned makes provided they meet specifications and are approved by Consultants.

The contractor has to submit at least two makes for Consultants' approval prior to placing order.

List of approved manufacturers & suppliers of materials, Equipment & Materials
Recommended Manufacturers

1. Ductable Inverter/High wall Split & Cassette Units (4 star & Above rated with Copper condenser) - **Blue star/ Hitachi / Mitsubishi Heavy / Daikin.**
2. Pre-Filters & Filters (non-flammable) - Airtech / Thermo dyne / Uccomech
3. Piping-
 - a) Cu piping - Soft (20G) - Kobe (Japan) / Mandev Tubes / Met tubes (Malaysia) / Nissan / Rajco
 - b) Cu piping - Hard (18G) - Kobe (Japan) / Mandev Tubes / Maxflow / Nissan /Rajco / Simitomo (Japan)
4. Insulation-
 - a) Closed cell nitrile elastomeric Class 'O' Armaflex /Aeroflex / Eurobetex / K – Flex
 - b) Adhesives (when dry non-flammable) Armaflex 520 / Pidilite SR 998 / Foster IID

5. Electricals – (IS)

- a) Starters - L&T / Merlin Gerlin / Siemens
- b) Contactors - ABB / L&T / Merlin Gerlin / Siemens
- c) Switchgear - Havells / L&T / Merlin Gerlin
- d) Ammeter - Auto-Electric / Rishab
- e) Voltmeter - Auto-Electric / Rishab
- f) All panel accessories - Technics
- g) Capacitors - Asian / Datar / L & T / Siemens
- h) ELCB's - Datar / L & T / MDS / Prok
- i) MCCBs, MCB's - ABB / L&T / Merlin Gerlin / MDS
- j) SFU's - ABB / L&T / Merlin Gerlin / Siemens
- k) Electric Meters - Alacrity / Enercon / Secure
- l) Cables-
Power - Finolex / Gloster / Geoflex / Polycab
Control - Finolex / Geoflex / Polycab / Universal

SECTION 19: LIFT WOTK

SUPPLY, INSTALLATION, TESTING, COMMISSIONING AND MAINTENANCE OF ONE LIFT (10 PASSENGER) AFTER DISMANTLING EXISTING LIFT

1. General

These specifications cover the details of Electro-mechanical Elevator equipment to be supplied, inspection as may be necessary before dispatch(at the cost of manufacturer), delivery at site, installation, testing, commissioning and handing over and the defects liability for a period of 1 year after virtual completion of all works.

These specifications shall be read in conjunction with the General Conditions of Contract (GCC) and Special Conditions of Contract (SCC) with all correction slips as well as schedules and drawings. In the event of any discrepancy between these specifications and inter-connected contract documents, the stringent of the two shall be followed.

The equipment and installation covered by these specifications and drawings shall conform to codes of practice in force and highest standards of workmanship and materials. This work shall be done in accordance with the provisions of the Lift Act, and subsequent amendments, as also any state or local Act in force and latest Indian Standard 14665.

The Electrical wiring shall strictly comply with IS:732 and the entire installation shall be in accordance with the Indian Electricity Act 2003 and Indian Electricity Rules 2010 as amended to-date.

The Contractor shall follow all statutory requirements as well as best trade practices in the manufacture and installation of elevators. The Contractor shall arrange to obtain the statutory approval of the Inspectorate of Lift as may be required before commencement of the erection and for commissioning of the Elevators and handover for operation after satisfactory tests.

2. DRAWINGS

Before commencing work, the Contractor shall prepare and submit all drawings necessary to show the general arrangement and details of elevator installation. These drawings must be approved by the Employer and by Statutory Authorities before installation and shall become part of the contract.

The Contractor shall, within 10 days of receipt of a Letter of award of contract, submit 3 copies of all working drawings showing hoistway and machine room layouts clearly indicating and specifying all connected structural, electrical and architectural works including imposed structural static / dynamic loads and electrical ratings. Within 15 days of receipt of letter of award of contract, the Contractor shall obtain from the Employer all the information he needs to prepare his drawings and shall have any interaction with the Employer to finalize all parameters and data for design. The Contractor will be held responsible for any discrepancies, errors and omissions in the drawings or particulars submitted by him even if these have been approved by the Employer. On approval of these drawings by the Employer (within 1 weeks of submission of full documentation), the Contractor shall submit five copies of approved working drawings incorporating corrections / comments, if any made by the Employer, and shall immediately commence work.

On completion of work, the contractor shall supply four sets of CD's and four copies of the detailed wiring diagram, as-built drawings and equipment maintenance manuals. Further, a copy of such detailed diagram and a set of instructions for evacuation of passengers, in case of breakdown of the elevator, shall be framed and installed in the respective machine room by the Contractor.

The Contractor shall carry out all the work strictly in accordance with drawings, details and instructions of the Employer.

3. LIFT CONTRACTOR'S RESPONSIBILITIES: Main and Ancillary Works

Dismantling the entire lift machinery including all accessories in respect of existing one number 10 passenger lift, shifting of dismantled materials from the site immediately.

All cabling, wiring (including new wiring for hoist way lighting with LED bulb/tube light) and earthing from the electrical panel to lift room to be done by the contractor.

All machine bases, pedestals, and structural steel supports and brackets for the installation, to suit the sizes of the hoist-ways. Steel required for insert plates/ISMB/Beams for support of equipment in machine room and grouting/installing on foundation/slab/ wall.

Sill tracks including sill supports, if required.

Lift-pit ladders, Screen guards, fascia plates and other protection for installation.

All chasing and cutting of pockets/holes and making good. (All cutting, fastening and chasing work shall be as approved by Employer).

Ensuring safety against accidents including barricading all openings and caution signs. All statutory rules and regulations shall be observed.

MS pipe Scaffolding for installation in the lift-shaft. Bamboo scaffolding strictly prohibited.

All other items necessary for satisfactory execution and completion of works, whether specified or not.

Any additional work to satisfy the inspection authority for obtaining approval.

Any minor chipping work required for adjustment of Guide rails/carriage etc.

Sealing of all holes made in RCC walls during the course of installation.

Commissioning spares.

Price of commissioning spares (Itemized with Quantity) shall be included in elevator supply rate.

Obtaining approval of elevator inspector before commissioning of elevator.

The space will be provided for safe keeping of lift material. Bank will not responsible for any loss/theft.

Employer shall be responsible for safety of elevator and its accessories only after approval of elevator by lift-inspector and handing over to Employer after checking of

complete satisfactory operation as per specification.

All the material shall be offered for inspection in factory (at the cost of manufacturer) and shall be dispatched to site only after receipt of Release order from Employer.

Each and every material, including cables, required for satisfactory erection and operation of elevator shall be included in the scope of supply and work.

4. SOUND REDUCTION

The Contractor shall provide necessary sound reduction materials, such as rubber pads of suitable density to effectively isolate the machine from the machine beams and/or flooring/ walls.

Noise level inside cars and in the machine room shall be maintained at minimum levels and in any case not more than specified under PERFORMANCE PARAMETERS.

5. TRACTION MACHINE

The machine shall be gearless traction type with motor (PMS), electro-mechanical type of brake and driving sheave mounted in proper alignment on a single heavy cast-iron base or steel bedplate.

The worm shaft shall be fitted with roller bearings to take end thrust. The sheave shaft shall also be fitted with roller bearings to ensure proper alignment. All shafts shall be provided with well-designed keys.

Rotating parts shall be statically and dynamically balanced.

The drive sheave shall be designed with machined V-grooves to ensure adequate traction with minimum wear on rope. All sheaves including deflector sheaves, where used, shall conform to I. S. 14665 (Part 4 section 3)

Adequate and dust – proof lubrication shall be provided for all bearings or gears.

The brake shall be suitably curved and provided with fire-proof friction lining. The operation of brake shall be smooth, gradual and with minimum noise. The brake shall be designed to be of adequate size and strength to stop and hold the car at rest with rated load. The brake shall be capable of operation automatically by various safety devices, current failure and by the normal stopping of the car. The brake shall be released electrically. It shall also be possible to release the brake manually so as to move the lift car in short stops. Suitable Brake release tools shall be supplied and stored in the machine rooms/ agreed place.

For manual operation of elevators, up and down direction of the movement of the car shall be clearly marked on the motor or traction machine. A warning plate in bold signal red colour "to switch off the mains supply before releasing the brake and operating the wheel" shall be prominently displayed.

6. HOIST MOTOR

The motor shall be suitable for 415 Volts +10%, 50 Hz. + 6%, 3 Phase A.C. Supply. The motor must be designed for arduous elevator duty, rapid reversals and constantly repeated starts and stops as defined in the relevant codes of practice. All windings must be heavily insulated, adequately impregnated for tropical climate and mechanically

strengthened and must be specifically designed to have a high starting torque and low starting current characteristics within the limits acceptable to electricity supply co. requirements and I.E. Rules. The motor shall be designed in such a way as to withstand occasional overloading above its rated capacity and shall have overload protection of relay and protection against phase failure as well as phase reversal. The motor shall have good speed regulation under different conditions of load and shall be designed to give a noiseless and vibration-free operation. Insulation shall be class F. HP of the motor of each lift should be specified.

7. MOTOR CONTROL AND DRIVE

The lift motor shall be controlled by a variable voltage variable frequency (V.V.V.F.) micro-processor control system or upgraded system, which shall control and monitor every aspect of elevator operation at all stages of the car motion cycle on real time basis.

The A.C. V.V.V.F. or Re-Gen drive system shall control A.C. voltage and frequency concurrently with the hoist motor to regulate the elevator's actual performance to match closely the ideal speed pattern, obtain maximum efficiency of operation and provide a very smooth ride.

Frequency shall range between zero and rated value.

The Controller shall be provided with a self-diagnostic programme to keep downtime to a minimum possible.

The controller shall intelligently adjust door times in response to car calls, hall calls and "Door Open" button operation.

An Inspector's changeover test switch and set of test buttons shall be provided in the controller. Operation of the Inspector's changeover switch shall make both the car and landing buttons inoperative and permit the elevator to be operated in either direction from the controller for test purposes by pressing corresponding test buttons in the controller. Controller should have Integrated Field Test Mechanism. It shall not, however, interfere with the emergency stop switches inside the car or on the top of the car.

8. GUIDES AND FASTENINGS

- I. Guide-rails for car and counterweight shall consist of machined mild steel tee sections, erected plumb, and securely fastened to the Elevator well framing by heavy steel brackets, suitably spaced, to limit deflection of guide-rails to 3 mm under normal working conditions.
- II. The guide-rails shall be of suitable section with ends forming matched joint and shall be connected with steel fish plates.
- III. Guide-rails shall cover the full height of the hoistway and pit.
- IV. Guides shall be designed to withstand the action of safety gear when stopping a counter weight or fully loaded car.
- V. The max. deviation from true plumb and alignment of guide rails shall be 2 mm.
- VI. All support framing shall be rigid and shall be designed to restrict displacement of the point of support of brackets to 3 mm under normal working conditions.

- VII. The whole guide-rail installation, including expansion joints, shall be designed for a smooth ride.
- VIII. The guide-rails shall be protected during storage and installation with a rust-inhibiting coating which shall be cleaned off on completion of installation.
- IX. Guide-shoes shall be adjustable type and mounted so as to provide continuous contact with guide rails under all conditions.

Guide shoes shall be provided at top and bottom of each side of car and counterweight and shall be designed for quiet operation.

Additional guide shoes shall be provided on each side of buffer frame in case of oil-buffers.

9. SAFETY

In addition to other specifications, the Elevator shall be provided with safety devices as follows: -

- I. Against overload.
- II. Safety gear on car so that in the event of rope breaking or loosening, the car will be brought to rest immediately by means of grips on the guides.
- III. The over-speeding car shall be automatically brought to a gradual stop on guide-rails and power supply to the hoist motor shall be switched off.
- IV. Over-speed centrifugal governor operating the safety gear in case of over-speeding of car in the down direction.
- V. Car gate lock in the event of car gate being opened, when passengers are in the car, the elevator will be brought to rest.
- VI. Over-travel limit switches at top and bottom limits of travel to disconnect the power supply and apply brakes to stop the car within a defined safe distance in case of over-travel in either direction
- VII. Ultimate terminal switches to stop the car automatically within top and bottom clearances independently of normal over-travel limit switches but with buffers operative.
- VIII. Protective guards to counterweights in pit, rope sheaves and wherever required.
- IX. Toe guard apron to the car platform as per statutory requirements.

10. CAR

a. Cabin Size

The internal clear dimensions of the cabin shall be as per those specified in IS 14665-Part I. The car shall be so mounted on the frame that vibration and noise transmitted to the passengers inside is minimised.

b. Frame and Safety Device

The car frame shall consist of mild steel channel top and bottom securely riveted or bolted and substantially reinforced and braced so as to relieve the car enclosure of all strains when the safety device comes into action due to overspeed or when the capacity loaded car is run on the buffer springs at normal speed.

The safety device mounted on the bottom members of the frame operated by a centrifugal speed governor shall be arranged to bring the car to a gradual stop on the guide-rails in the event of excessive descending speed; and provision shall be made to shut off the power supply to the motor.

c. Buffers

Spring buffers (2 Nos.) or as recommended by supplier shall be furnished and installed in the pit under the car and counterweight. These buffers shall be mounted on RCC Pedestals in the pit. The car buffer spring must be of correct design to sustain the car with capacity load without damage, should the car terminal limits become inoperative. The car buffers must be located symmetrically with reference to centre of car.

The Contractor may alternatively offer oil type buffers. The plunger shall be mild steel, designed for a very high factor of safety and accurately machined. A toughened rubber bumper shall be fitted to the plunger top to cushion the impact of steel buffer plates attached under the car and the counterweight. An oil gauge shall be provided to check the oil level.

d. Counterweight

The Elevator shall be suitably counter-balanced for smooth and economical operation. Cast iron weights shall be contained in a structural steel frame properly guided with suitable guide shoes (4 Nos).

Substantial expanded metal counter-weight screen guard shall be furnished and installed, as required by Lift Inspector.

e. Hoisting and Governor Ropes

Bright/Stainable steel wire ropes with fibre cores suitable for elevator duty shall be used for hoisting ropes. The roping ratio shall be 2:1.

Not less than 3 independent suspension ropes shall be provided and designed to share load equally by means of adjustable shackle rods with equalizer springs at each end of hoisting ropes.

Each rope shall have adequate section to provide a minimum factor of safety of 4 based on the max. force on the rope.

Governor ropes shall be similar to hoisting ropes. Their ends shall be securely attached to the car and to the safety gear. The governor ropes shall be tensioned by a weight loaded device in the pit.

The contractor shall submit the technical details and source of supply of ropes to the Engineer-in-Charge as well as a certificate of performance of ropes from an approved test laboratory or Authority.

Compensation for travel shall be provided for all elevators having a travel of more than 30m.

f. Enclosure

The car enclosure shall be as per drawings and as specified. The cabin floor, roof and

walls shall be free of distortion and undue deflection as per IS 14665 – Part 4, Section 3.

g. Brakes

D.C. brakes will be spring-applied and electrically released. They shall be designed to provide smooth stops under variable loads.

h. Doors

Provision shall be made for vertical and horizontal fine adjustment of doors.

i. Door Operators

The door operators shall be VVVF inverter controlled heavy duty A. C. motor, allowing variable opening and closing speeds and full synchronization of car and landing doors.

j. Travelling Cables

The travelling cables shall be multi-core with high conductivity stranded conductors specifically designed for elevator duty. The cables shall be provided with retaining straps and individual cable clamps.

k. Emergency Lighting

A self-contained, non-maintained emergency light with a trickle- boost charger shall be provided.

l. Emergency Exit and Evacuation

An emergency exit shall be provided on car roof. A safety switch shall be provided to prevent the car travelling when the emergency exit is open.

An emergency key shall be provided on each landing to unlock the doors for evacuation and maintenance.

The doors shall be capable of being opened manually during power failure from inside the car when the car is within a landing zone.

m. Intercom

An Intercom system shall be provided between the car, main landing & machine room.

n. Manual Cranking Facility

Manual cranking facility shall be provided in the machine room/agreed place to facilitate evacuation of passengers in case of power failure. The manual mode shall be in addition to automatic car failure operation, specified elsewhere.

o. Emergency Stop Switch

A stop switch in the machine room / top of car shall be provided for use by maintenance crew to cancel all car and landing calls for a particular elevator.

p. Maintenance Switch

On operation of the maintenance switch (located on top of the car) by the maintenance crew, the car shall travel at slow speed not exceeding 0.85 m / sec by continuous operation of a button.

q. Landing Door Interlocks

Electrical interlocks shall be provided to ensure that the car does not operate unless all

doors are closed and unless the car reaches a landing zone.

r. Overload Indicator

An overload indicator with buzzer shall be provided in the cabin to indicate to the passengers that the car will not start as it is overloaded.

s. Other Features

All features specified in the Schedule shall be provided.

Full length handrails shall be provided on the side wall panels (on both sides).

The door closing time shall be set for min. 5 seconds and the door closing speed shall not exceed 0.25 m/sec.

t. Operating Panels, Buttons and Switches

Main and secondary car operating panels, buttons and switches shall be located on the two front wall panels next to the car door and as specified in the Schedule of Elevators.

All buttons and switches shall be clearly legible with fade-proof text and figures, and shall be easily accessible, all panel letters shall be inscribed with Braille for VC persons.

11. ELECTRIC WIRING

Necessary insulated wiring to connect all parts of the equipment shall be furnished and installed. Insulated wiring shall be flame -retardant and moisture- resistant and shall be run in fire retardant PVC conduits. All cables shall be copper conductors.

Trailing cables shall be PVC sheathed copper conductor multi-core ribbon type designed for elevator service. They shall be flexible and shall be suitably suspended to relieve strains on individual conductors. All copper conductors shall be of appropriate gauge copper to avoid excessive voltage drop. All wires, cables, conduits, metal boxes, fittings and earthing shall comply with statutory requirements and IS specifications.

The controller unit comprising of the main circuit breaker, adjustable overload and phase reversal and phase failure protection, all the circuit elements, transformer, rectifier for D.C. control supply, inverter power pack, terminal blocks etc. shall be enclosed in an insect vermin- proof, sheet- steel floor or wall- mounted cabinet with hinged doors at front or at both front and rear. Proper warning boards and danger plates shall be provided on both sides of the controller casing. Sheet steel used for controller cabinet shall not be less than 18 gauge and shall be properly braced, where necessary. Suitable gland- plate shall be provided for cable entry. The battery for the charger unit shall be suitably placed in the machine room/agreed place.

All sheet steel work shall be surface- treated and painted with two coats of synthetic enamel paint of suitable shade, both inside and outside, over two coats of zinc primer. The existing lift power supply to be used.

12. PAINTING

All exposed metal work furnished in these specifications, except as otherwise specified, shall be given one shop coat of anti-corrosive primer after approved surface treatment of metal surfaces and two coats of approved enamel paint of approved shade. Minimum DFT specified shall be met for each coat of paint. Painting shall be guaranteed to last for the guarantee period specified. All recommendations of the Paint Manufacturer shall be strictly complied with.

13. WORKS TESTS

The following tests shall be carried out at Works. The Employer shall be given notice of the time and procedure of the tests before they are carried out, and shall be given facilities for observing the tests at Works. Contractor may specify the tests he will be able to show in the factory.

- a) High voltage works tests of equipment, which is not already tested in accordance with appropriate IS codes.
- b) Buffer test.

14. TESTS ON COMPLETION

The following tests shall be carried out to the satisfaction of the Engineer-In-Charge.

- I. Insulation resistance and earth test for all electrical apparatus.
- II. Continuous operation of the elevator under full load conditions and simulated starts and stops (150 nos. per hour each) for one hour at the end of which time the service temperature of the motor and the operating coils shall be tested. This shall be as per I.S. specification.
- III. The car shall be loaded until the weight on the rope is twice the combined weight of the car and the specified load. The load must be carried on for about 30 minutes, without any sign of weakness, temporary set or permanent elongation of the suspension rope strands.
- IV. The following items shall be tested :
 - a. Levelling accuracy at each landing in conditions of fully loaded and empty car.
 - b. No load current and voltage readings both on 'Up' and 'Down' Circuits.
 - c. Full load current and voltage readings both on 'Up' and 'Down' Circuits.
 - d. One and quarter load current and voltage readings both on 'Up and 'Down' Circuits.
 - e. Stalling current and voltage and time taken to operate overload.
 - f. Overload protection.
 - g. Gate sequence relays, if provided and installed.
 - h. Car and landing door interlocks.
 - i. Collective control and priority sequences, if installed.
 - j. Safety gear mechanism for car and counterweight with fully loaded car and also with only 68 kg load.
 - k. Speeds on Up and Down travel with full load, half load and empty car.
 - l. Door contacts.
 - m. Final terminal stopping device.

- n. Normal terminal stopping device.
- o. Car and counterweight buffers with contract load and contract speed.
- p. Operation of controllers.
- q. Manual operation of elevator at mid-way travel.
- r. Emergency operation.
- s. Phase failure and Phase reversal test.
- t. Any other test necessary.
- u. Inspection test plan (as given below).

	Tests	Reference Documents	Sample size	Scope of Inspection		
				Employer/ Vendor Consultant/ Remark	Third Party	
A	Type Tests					
	For Control Panel					
i	Temperature rise test	IS13947,IEC 60947		W	R	
ii	Dielectric Properties	-do-		W	R	
iii	Short Circuit withstand capacity	-do-		W	R	
iv	Verification of IP protection	-do-		W	R	
	For Motor					
i	Type Test Certificate	IS 8789		W	R	
B	Routine Tests					
	For Control Panel					
i	Routine Test Certificates	As per relevant IEC	100%	W	R	
	For Motor					

i	Routine Test Certificates	As per relevant IEC	100%	W	R	
C	Site Tests					
i	Insulation resistance test and HV test	ISI4665	100%	W	R	
ii	Operation and Interlock sequence test on control circuit	- do -	100%	W	R	
iii	Earthing continuity tests	- do -	100%	W	R	
iv	Test to determine that the motor, brake, control equipment and door locking devices and limit switches function correctly.	- do -	100%	W	R	
v	Brake to be tested to check whether it can sustain a car at rest with 125% of rated load.	- do -	100%	W	R	
vi	Test to determine that the car raises and lowers at rated speed.	- do -	100%	W	R	
vii	To test whether the lift car achieves the rated speed.	- do -	100%	W	R	
viii	To test whether the safety gear stops the lift car with rated load (Over speed test)	- do -	100%	W	R	
	Note:					
	1) W = Witness, R = Review.					

v. Tests on completion shall also be performed to the satisfaction of Inspector of Lift.

15. STATUTORY APPROVALS

All statutory approvals from commencement to commissioning of elevators including license for operation of the lift shall be obtained by the Contractor from the Inspector of Lift and other Authorities. However, the Employer will provide all necessary assistance for providing documents, drawings and certificates pertaining to other contractors, if required.

16. FEATURES REQUIRED FOR VVVF ELEVATORS (1 m/s)

a. Fireman's Switch

A fireman's toggle switch shall be provided in a break glass for the specified elevator at ground floor to enable firemen to bring the elevator non-stop to ground floor from any location and to cancel all calls until the car is operated on attendant control. The Fireman's switch shall bring other two lift also to ground floor and will remain there with doors open.

b. Emergency Power Operation

In case of power failure, Automatic Rescue Devices shall bring the elevator safely to the nearest landing and open the doors till power supply is restored and then permit operation of Elevators on emergency power, if any.

A trickling battery shall be provided to supply power to emergency light fixtures, alarm and intercom.

c. Profile Generator

A profile generator or similar device shall be provided to use the car at an optimum speed level and to improve levelling accuracy.

d. Data Storage and Retrieval

Data from daily operations shall be stored in the control system and shall be retrievable.

Data shall include all particulars of calls, mode of operation, door open/close, acceleration / deceleration, stops, status etc. The contractor shall specify in his offer the full capability of his system in this regard.

It should be possible from such retrieved data to prepare an up-dated traffic analysis at any time.

e. Anti – Nuisance

If number of calls registered is in excess of corresponding car load, all car calls shall be cancelled.

f. Home Landing Facility

A car shall return to a pre-determined landing after the last call is answered.

g. Fire Alarm Home Landing (Through BMS)

The contractor shall provide only potential free contacts and communication ports for fire alarm home landing through BMS. Wiring for camera / BMS / intercom termination in the lift shaft till the machine room/till BMS room system will be in the lift contractor scope. This

includes the cost of necessary materials and labour.

h. Load Non stop

When the car load exceeds a predetermined limit, the elevator shall not respond to hall calls.

i. Parking shut - off

After the parking of the lift, the lights and fans shall be turned off. The display of parking sign is not mandatory. However, the floor in which the lift is parked can be displayed.

j. Separate door times

When a car responds only to hall calls or only to car calls, the door shall open for a shorter time than when responding to both car and hall calls.

k. Door Safety

Multi-beam infrared / ultrasonic electronics curtains shall be provided to scan the doorway and reverse the door closing in case of any obstruction.

l. Door Failure Operation

When an obstruction prevents a door from opening, the controller shall attempt its removal by repeated opening and closing, failing which the car shall travel to the next floor.

m. Double Door Operation

If both up and down calls are registered at a hall which is the last registering hall in the direction of the car, the elevator shall travel to that hall and open / close the doors. After this, the car shall reverse its travel and shall open / close the doors again unless no car calls are registered at that floor.

n. Nudging Door Operation

When the doors remain open for more than a predetermined period, a buzzer shall sound and the door shall close automatically. The door sensing device shall be rendered inoperative but the Door Open button and the safety shoe shall remain operative

o. Self - Diagnostic Facility

The Controller shall perform self - diagnostic tests and report the health of the system.

The system shall take care of minor faults like door operation and motor overheating.

A universal service tool shall be provided in each machine room to assist technicians in quick pin-pointing of mal-function.

p. Car Failure Operation

In case of car mal-function, the system shall make a self - diagnostic check and then allow

the car to travel to the nearest floor at slow speed, if safe.

q. Selective floor Service

Programming for selective floors services shall be software driven.

r. Manual Cranking and Slow Speed Travel

A manual cranking facility shall be provided.

Slow speed operation shall be possible from machine room and car top.

s. Auto Fan Off

In case no calls are registered for a pre-set time, the cabin fan shall be automatically switched off.

t. Automatic Rescue Device

In case of mains power failure and elevator control system failure, the elevator's own rechargeable and maintenance free battery power shall move the car to the nearest floor and the door shall open automatically for automatic rescue of passengers. A battery run-down indicator shall be provided.

17. CONNECTIVITY TO BUILDING MANAGEMENT SERVICES

The Contractor shall provide potential-free connectivity and communication ports for elevator to Building Management System.

18. PERFORMANCE PARAMETERS

The following parameters shall be achieved in the installation:

* Leveling Accuracy	± 3 mm for 1.0 m/s speed (An automatic floor leveling device shall be incorporated in the
elevator control to ensure leveling	accuracy within the specified limits.)
* Jerk level	0.9 – 1.5 m/s ³
* Noise level in car	58 dB
* Noise level at 1 M in machine room	60 dB
* Acceleration rate	0.6 – 1.0 m/s ² (adjustable)
* Max. Car vibration	20 mg.

19. SUBMITTALS WITH TENDERS

The following items are also required to be submitted in duplicate along with the tender.

- I. Catalogues with offered items highlighted, motor HP etc.
- II. List of imported components
- III. Compliance Statement for guaranteed performance parameters given in Specification 20.0 above and "Schedule of Elevators" below.

20. MAINTENANCE DURING DEFECTS LIABILITY PERIOD/WARRANTY PERIOD

Comprehensive maintenance during Defects Liability Period inclusive of periodic

servicing, prompt attention to Employer’s complaint, prompt rectification of all malfunctions and equipment failures, replacement of defective equipment / parts, replacement of light fittings, lubrication including lubricants, maintaining correct alignment and levelling of cars and ensuring smooth running, starts and stops etc. all complete to Employer’s satisfaction shall be done.

21. NON - COMPREHENSIVE ANNUAL MAINTENANCE CONTRACT

Terms of Agreement:

This rate contract agreement shall remain in force from the date of commencement i.e. after expiry of warranty period, till the expiry of the contract (including extension if any). It shall be open to user to terminate this agreement any time during its currency by giving one month notice to the vendor, in writing. This rate contract agreement will be for a period of 12 months from the date of commencement.

Support:

- Vendor will provide support on calls lodged by the user.
- Support should be available on 24 x 7 basis.
- The complete support comprises of comprehensive maintenance facility of Lift during Warranty period.
- Uptime guarantee: The agreement stipulates that vendor shall maintain the system with uptime of 98%. The uptime will be calculated on yearly basis.
- A copy of agreement between service provider & OEM should be provided to user.
- Maintenance Services: Vendor shall provide maintenance services under this agreement for the Lift on par with OEM's service standard.
- **Response Time for Call Centre Location:**
 - i. 2 Hour Response Time (24x7)
 - ii. 4 Hours Resolution Time (Including Response Time) for Minor Issues

08-10 Hours Resolution Time (Including Response Time) in case spare is required or in FGM Service. Dept. case of Major issues.

Reporting:

The Bidder shall prepare a monthly Uptime Summary Report in the User prescribed format. The vendor will enclose uptime report along with the bill for certification.

4. Penalty for SLA Non-Compliance:

Sr. No	Defect	Rectification time	Penalty (per day)
1	Defects resulting in failure of Lift	8 hours	Rs.1000/-
2	Any other minor defect	72 hours	Rs. 500/-

22. DISMANTLING OF EXISTING LIFT

- Dismantling of existing lift, including all accessories including Guide-rail, existing main electrical cabling shifting of dismantled materials from the site immediately. All civil / PCC/ RCC / Structural work modifications with proper finishing of modified portions/surfaces in the existing lift shaft.

- It will be Contractor's responsibility to display adequate sign boards at respective places during Dismantlement and erection process.
- Contractor shall also take adequate steps to block the entrances to the lift shaft at various levels/ floors to prevent possible accidents.
- Dismantled material shall be removed from site of work at regular intervals after notifying the owner so as to preserve sufficient working space for erection of new elevators.

Signature, Stamp and Name of Contractor

Lift Specification		
S.No		
1	Approved Makes	KONE / OTIS / SCHINDLER / JOHNSON / THYSSENKRUPP
2	Group Control	Simplex collective control w / wo attendant
3	Position of Machinery	Directly above the lift well
4	Type	PASSENGER AUTO LIFT (10 Passenger) GEARLESS WITH MACHINE ROOM
5	Fireman Service	Yes
6	No. of Passengers	10 (660Kg - 680 Kg)
7	Speed in Meters /sec.	1.0 m/s
8	Floors served :	G,1,2,3,4
9	No. of Stops	5
10	Total Travel (Approx.)	70 feet
11	Size of lift well (Width X Depth)	1300mm (W) x 1350 mm (D) x 2200 mm (H) (as per actual measurement at site)
12	Traction Machine	The traction equipment shall be rated for 10 Passengers or for higher standard capacity manufactured by the manufacturer
13	Pit Depth	1350 mm (as per actual measurement at site)
14	Clear Overhead	5000 mm (as per actual measurement at site)
15	Control System	Microprocessor Based V.V.V.F. Or Regenerative Drive or equivalent with ARD System
16	Power for Machine	415 Volts \pm 10% AC 3 Phase, 50Hz \pm 6%
17	Auxiliary Power	230 Volts \pm 10%, 50Hz \pm 6%
18	CAR :	1850 mm x 2000 mm
19	Floor	12mm thick granite tiles (Provision for additional dead weight on this account may be kept) – Granite design and colour to be approved by Bank
20	Side panels	SS-304 panels (1.0 mm) and skirting to be approved by Employer. Additional SS-304 Mirror Finish Handrails on rear car panels. (A laminated mirror glass shall be attached to the rear panel of the lift)
21	False Ceiling	CD-41 or equivalent with approved concealed LED lighting as per design to be approved by Bank
22	Car Ceiling	SS-304 (Hairline finish) with white SS sheet
23	Car doors/landing doors	800mm(wd)*2000mm(ht) (as per site condition) automatic power-operated centre-opening; sliding, transparent type laminated toughened glass of 11mm thickness with multi beam infra-red electronic door detector. (To be done as per the actual site measurement/BIS dimensions)
24	Lighting and Ventilation	LED lamps to give about 200 lux lighting level; Battery – operated emergency light with trickle-boost charging; axial fan with suitable ceiling grilles etc. all as per approved design

25	Main Car operating panel (one for car door side)	<p>Aesthetically designed stainless steel SS304 hairline finished face-plate with ring LED illuminated micro-switch/touch-sensitive digital floor call buttons, position indicator; capacity indicator; door open, door close, emergency stop, and battery-operated emergency light and alarm buttons; audio-visual overload alarm, and speakerphone with Braille sign for visually challenged with Government of India norms.</p> <p>Built-in service cabinet with fan switch, attendant / automatic mode (key operated), attendant switch, non-stop travel button, and group / independent switch. Built-in ventilation slits. Speaker for music play.</p> <p>In case the installation of control panel is not possible/feasible adjacent to the lift doors, the same can be kept on the side panel, which depends on the site condition. Prior permission is required by the Bank for the same</p>
26	Auto voice announcement for floor Nos.	Yes
27	Intercom connected to lobby, machine room and fire console room	Yes
28	Attendant/automatic selector switch	Yes
29	Independent operation key switch (with attendant selector-switch)	Yes
30	Non-stop travel button (with attendant selector-switch)	Yes
31	Call cut-out key switch (with attendant selector-switch)	No
32	Automatic fan switch-off at preset time	Yes
33	Public address system for channel music and announcements	Yes
34	Car Capacity Indicator	Yes
35	Automatic Rescue Device	Yes
36	Visual indicator for fire and emergency operations	Yes
37	Additional facilities for disabled persons	Yes, (As per statutory requirement)
38	Cabin sill	Aluminium Extrusion
39	Landing sills	Aluminium Extrusion
40	Hall Button Panel	Hairline finished SS-304 stainless steel face-plate with micro-switch / touch-sensitive luminous buttons.
41	Hall lantern and chime	Hairline finished SS-304 stainless steel face-plate with illuminated up and down arrows and arrival chime for each elevator landing

42	Hall position indicator panels on all upper floors	Hairline finished SS4 stainless steel face plate with digital floor Nos. for each elevator landing
43	Overload non- start	Yes
44	Lift car full to capacity	No stopping on landing calls

Date and Place:

SIGNATURE OF APPLICANT(S)

Note: Exceptions of the above, if any, shall be clearly mentioned with details by the tenderer for evaluation/consideration if any.

Even though an applicant may satisfy the above requirements, he would be liable to disqualification if he has:

- (a) Made misleading or false representation or deliberately suppressed the information in the forms, statements and enclosures required in the tender document.
- (b) Record of poor performance such as, abandoning work, not properly completing the contract, or financial failures / weaknesses etc.