

**CLIENT** : **BANK OF MAHARASHTRA**

**PROJECT** : **PROPOSED INTERIOR WORK AT FIRST FLOOR, PIMPRI PREMISES.**

**PART I** : **ELECTRICAL WORK**  
**TECHNICAL BID / TERMS & CONDITIONS.**

**INDEX**

ELECTRICAL WORK OF BANK OF MAHARASHTRA, **AT FIRST FLOOR, PIMPRI**  
(TECHNICAL/CONDITIONS BID)

PART I

SERIAL NO.	CONTENTS	PAGE NOS.
1.	NOTICE INVITING TENDER	
2.	FORM OF TENDER	
3.	CONDITIONS OF CONTRACT	
4.	SPECIAL CONDITIONS OF CONTRACT	
5.	FORM OF AGREEMENT	
6.	LIST OF DRAWINGS	
7.	APPENDIX - A	

PART I A INTERIOR RENOVATION/ ELECTRICAL WORKS

1.	ANNEXURE-H SAFETY CODE	23
2.	SPECIFICATIONS- ELECTRICAL WORK – Section 1	24
3.	IS SPECIFICATIONS	30
4.	TESTING & COMMISSIONING	31
5.	ANNEXURE –1	32
6.	TECHNICAL SPECIFICATIONS- Section 2	33
7.	LIST OF APPROVED MAKE	40

**NOTICE INVITING TENDERS**

1. Sealed Tenders are hereby invited on behalf of **BANK OF MAHARASHTRA** for the proposed electrical works to be carried out at **AT FIRST FLOOR, PIMPRI**.
2. The work is to be completed within **45 DAYS** from the date of issue of the work order.
3. The tender documents can be obtained from the Architects, **KETAN GADGIL STUDIO, 6 CHANDRAPRABHA APARTMENTS, PRABHAT ROAD, PUNE** on payment of **Rs.2,500/-** per tender set.

Each tender set comprises of the following :

- 3.a. Part I (Technical/Conditions Bid) – Contents as per index sheet
- 3.b. Part II (Commercial Bid) – Contents Interior Furnishing BOQ with drawings.
4. Tender documents shall be available from **14/06/2018** during office hours from **10.00 A. M. to 05.00 P. M.** from Corporate Services Department, Lokmangal, Shivajinagar, Pune – 5.

**Prebid meeting is arranged on 22<sup>nd</sup> June 2018 at 11.00 A.M. at Pimpri premises**

5. 2 Sets of tender documents including the set of drawings & the price bid must be returned to **BANK OF MAHARASHTRA**, on or before the last date of submission **29/06/2018** before **4.00 P. M.**

**The sealed tenders will be opened at 4.30 P.M on 30th June 2018 , interested bidders may attend tender opening process.**

6. 6.1 At the same time of submitting his tender, the tenderer shall deposit an earnest money deposit of **2% OF TENDER AMOUNT** by Demand Draft / FDR issued in favour of **BANK OF MAHARASHTRA**. Payable at Pune. for proper execution of the contract. if invalid DD / Cheque found with tender, bank reserves the right to reject the said tender

**Security deposit – 10%** of final bill amount will be kept by and with bank without interest for 12 months from the date of final payment.

- 6.2 The earnest money deposit will not bear any interest. The earnest money deposit will be forfeited in the event of any evasion, refusal or delay on the part of the tenderer to sign and execute the contract on acceptance of his tender. The earnest money deposit, without any interest, will be returned to the tenderer whose tenders are not accepted. The earnest money deposit, bearing no interest, will be returned to the tenderer whose tender is accepted only after the satisfactory completion of the project.
7. The tender shall be submitted as per instructions with the name of the work super scribed on the envelopes written prominently and addressed to **BANK OF MAHARASHTRA., PUNE**. The full name and postal address of the tenderer shall be written on the bottom left hand corner of the sealed cover. The sealed tenders shall be submitted at the address mentioned above.
- 7.1 The tenders shall be submitted in the following manner and shall contain details / documents

as listed below :

- 7.1.1 **ENVELOPE ‘A’** :One sealed envelope super scribed (in addition to the name of the work) ‘ Technical/Conditions Bid ‘ Containing the following :
- A complete set of tender document (Part 1-Technical Bid) as issued, duly filled and signed by the tenderer.
  - Demand Draft towards the earnest money deposit in the name of ‘**BANK OF MAHARASHTRA ,PUNE.**’ Payable at Pune.
  - Exceptions and / or deviations which tenderer may desire to stipulate be given with the Tech. Bid in a separate letter. (Tenderers are advised to submit the tenders based strictly on the conditions of contract and specifications contained in the tender documents and not to stipulate any deviations. Should it, however, become unavoidable, deviations may be stipulated). The Bank reserves the right to reject such deviations or evaluate the tender containing deviations having financial implications adding to the cost for such deviations / reject the tender as may be determined by the Bank’s.
- 7.1.2 **ENVELOPE ‘B’** :One sealed envelope super scribed (in addition to the name of the work) ‘Commercial Bid’ Containing the following :
- A complete set of the tender document (Part II A – Commercial Bid & Part II B – Detail Drawings Set) and listed drawings as issued, duly filled and signed by the tenderer.
- 7.2 Tender shall be signed wherever provided for as well as pages of tender documents shall be initialed & stamped at the lower right-hand corner by the tenderer. All corrections should be initialed in the Commercial Bid.

8.	Acceptance of the tender will rest with the Bank who reserves the right to accept or reject any or all tenders in part or full without assigning any reason thereof. Any tender which does not fulfill any of the prescribed conditions would be liable to get rejected. The Bank is not bound to accept the lowest tender.
9.	All the rates mentioned in the tender are inclusive of all duties / taxes / levies / transport charges / octroi / works contract tax (WCT) etc. and shall remain firm till completion of work, no escalation in price will be payable for what-so ever the reason may be.
10.	The rates quoted in the tender shall remain valid for a minimum period of <b>Six months.</b>
11.	This tender notice ( including page no. from to ) shall form part of the contract.

**For BANK OF MAHARASHTRA**

**Sd/-**

**Date : 14/06/2018**

**FORMS OF TENDER**  
**(Blanks must be filled in by the Tenderer)**

To,  
**The Assistant General Manager**  
**Corporate Service Cell**  
**Bank of Maharashtra,**  
**Lokmangal**  
**Pune**

Respected Sir / Madam,

With reference to the tender invited by bank vide tender notice dated **14.06.2018** for the proposed **Electricalwork at First Floor , Bank of Maharashtra, Pimpri.**

I/We do hereby offer to execute the work under the contract at the respective item rate basis mentioned in the schedule of quantities.

I/We have examined and studied carefully the site of the proposed works, all the Drawings, Schedule of Quantities, Specifications and conditions of contract and I/We agree to comply whole of work within respective time limits mentioned in the tender, from the date of getting the intimation from you that our tender has been accepted and upon receiving the possession of the site.

I/We further undertake that on failure subject to the conditions of contract relating to extension of time, I/We shall pay damages to the ' Bank ' the sum named in Appendix to the condition of the contractor/Supplier as Liquidated damages for the period during which the work shall remain incomplete.

I/We have deposited as earnest money as amount of Rs.**(2% of tender amount)** ..... by D.D.No..... on ..... Bank in your favour (to be handed over along with tender documents), which amount is not to bear any interest and I/We do hereby agree that this sum shall be forfeited, in the event of accepting my/our tender and I/We fail to stat the work under the contract and execute the contract documents when call upon to do so.

I/We do agree to pay **10% of the total value of the work done as security deposit.**

I/We do agree that my/our tender shall stand disqualified in the event of –

- a) Failure to submit the tender in specified time and date.
- b) Any page of this tender is found missing.
- c) Any page of this tender form is not signed by us in token of acceptance.
- d) The rates and/or amounts in the schedule of quantities are not filled in figures as well as in words in English and all erasures are not counter signed.

I/We have read the notes attached herewith and do agree to the same.

Thanking you,

Yours truly,

Signature of the bidder with official seal/stamp of the firm. Name of the proprietor/partners of the firm – or

Name of the person having the Power of Attorney  
(to sign the contract along with Power of Attorney)

Name of the Bank in which the bidder maintains the account.

**NOTES**

1. The owner reserves the right to reject the lowest or any tender without assigning any reason for the same.
2. The bidder whose tender has been accepted shall within Five days of the intimation of acceptance of tender, submit the stamp paper of required value to the Architect for entering into agreement Bidder's failure to comply with these conditions within the time, shall give right to the "Bank" to revoke acceptance of the tender and forfeit his earnest money without any further notice to the bidder.
3. the decision of the 'Bank' will be given within 8 days from the date of receiving the tenders within which period the terms of the tender will be binding on the bidder. The earnest money will be returned to the unsuccessful bidder within a reasonably short period. If the bidder, after intimation to him, fails to collect his earnest money deposit within three years of date of intimation, the amount will be automatically forfeited.
4. No additions or alternations shall be made in the Drawings, the Specifications, Schedule of Quantities, the conditions of contract and the tender by the bidder and, if made, such tender is liable to be rejected. In case of the successful tender, any such additions and alterations made by the bidder will be treated as null and void. If the bidder wants to put any condition, he must mention them on a separate letter attached on the top of the tender form.
5. The validity of tender is 60 days from the date of opening.
6. The tender to be submitted, as two envelopes duly sealed and subscribed as –

**ENVELOPE NO.2**

It should contain following –

- a) Complete set tender documents as sold duly filled in and signed by the bidder as prescribed in different clauses of the tender documents, in one sealed and super scribed envelope marked as ENVELOPE NO.2

**ENVELOPE NO.1**

It should contain following –

- a) Earnest Money Deposit (EMD) original receipt. D.D. only. cheque will not be considered.
- b) In case of partnership form, attested copy of partnership deed, should be attached.

If contents of Envelope No.1 are found in order, then only Envelope No.2 will be opened.

ARTICLES OF AGREEMENT made on the ..... Between ..... (hereinafter referred to “the contractor”) of the one part And **The Assistant General Manager, Corporate Services Department**, Bank of Maharashtra, Head Office Pune, hereinafter referred to as “the Bank” (which term shall mean and include its successors in interest and permitted assignees) of the other part, WHEREAS the Drawings, and specifications and the priced schedule of quantities have been signed by or on behalf of the parties hereto and WHEREAS the contractor has agreed to execute upon and subject to the conditions set forth herein (herein after referred to as “the said conditions”) the work shown upon “the said drawings” and described in “the said specifications” and “the said priced schedule of quantities” at rates mentioned in the priced schedule of quantities (herein after referred to as “contract rates”) and WHEREAS the contractor has deposited Rs..... (Rupees.....) as security deposit for the due performance of the agreement.

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

1. In consideration of the payments to be made to the contractor as hereinafter provided he shall upon and subject to the said conditions execute and complete the works shown upon the said drawings and such further detailed drawings as may be furnished to him by the said designer and described in said specification and the said priced schedule of quantities.
2. The Bank shall pay the contractor such sum as shall become payable hereunder at contract rates in the manner specified in the said conditions.
3. The within plans, agreement and documents above mentioned shall form the basis of this contract, which for the time being as mentioned in the conditions of contract in reference to all matters of dispute as to the material workmanship or account and as to the intended interpretation of clause of this agreement or any other documents attached hereto shall be final and binding on both parties and may be made a rule of court.
4. The said contract comprises the building/buildings/roads/drawings work mentioned hereinbefore and all subsidiary work connected therewith within the same site as may be ordered to be done from time to time by the said Architect or the Bank even though such works may not be shown on the drawings or described in the said specifications of the priced schedule of quantities.
5. The Bank reserves to himself the right of altering the drawings and nature of the work and of adding to or omitting any items of work or of having portions of the same carried out departmentally or otherwise and such alterations or variations shall be carried out without prejudice to this contract.
6. The said conditions shall be read and constructed as forming part of this agreement and the parties hereon will respectively abide by and submit themselves to the condition and stipulations and performs the agreement as their parts respectively.
7. All disputes arising out of or in any way connected with this agreement shall be deemed to have arisen in Pune and only the courts in Pune shall have jurisdiction to determine the same.
8. The term of “Architect” in the said conditions shall mean Ketan Gadgil - Studio 6 chandraprabha, Prabhat road, Pune – 411 004, or in the event of their death ceasing to be the Architect for the purpose of this contact, such other person as the Bank shall nominate for that purpose, not being a person to whom the contractor shall object for reasons considered to be

sufficient by an arbitrator appointed in accordance with the said conditions. Provided always that no person subsequently appointed to be the Architect under this contract shall be entitled to disregard or over rule any certificates or opinion or decision or approval or instruction given or expressed by or the Architect for time being.

9. The term "Consultants" refer Ketan Gadgil - Studio, Pune or in the event of their ceasing to be the consultants for this project, such other person or persons as by the appointed by the Architect with approval of the Bank.
10. The contract is based on item rate basis.
11. The time shall be considered as the essence of this contract and the contractor hereby agrees to commence the work soon after the site is handed over to him or from next day after the date of normal work order as provided for into the said conditions whichever is later and to complete the entire work within thirty days subject nevertheless to the provisions for extension of time.
12. All payments by the Bank under this contract will be made only at PUNE as per the Architect's certificate AND the **TheAssistant General Manager, Corporate Services Department's** certificate.

The several parts of this contract have been read by us and fully understood by us.

Witness our hand this ..... Day of ..... 2018.

Signed by the said presence of

Bank

Contractor



### **3. Eligibility Criteria**

The bidder should fulfill the following eligibility criteria. They are required to submit copies of documents to substantiate their qualifying criteria.

- 1) Bidder should have valid Registration of PAN, GST , ESI , PF and income Tax clearance certificate etc
- 2) The bidder should have average annual turnover of more than 28.00 lacs during the last three financial years i.e FY 2015-16 , 2016-17 & 2017-18 (Valid CA certificate to be enclosed)
- 3) The bidder should be a profitable agency & should have shown the profits in each of last three financial years i.e FY 2015-16 , 2016-17 & 2017-18 (Valid CA certificate to be enclosed)
- 4) The bidder should have successfully executed minimum single work of similar type, costing more than Rs.28.00 lacs, during last three years (Proof of the same should be submitted)  
OR  
The bidder should have successfully executed minimum two works of similar type, costing more than Rs.14.00 lacs during last three years (Proof of the same should be submitted)
- 5) The bidder should not have been blacklisted by any PSU Bank or enterprise /Private Bank/NBFC/Co-operative Bank/Govt department during last 05 years . A written undertaking has to be given by the bidder

### **4. CONDITIONS OF CONTRACT**

1. Tenderers shall sign wherever provided of. Tenders not so signed shall be rejected. The tenders shall be submitted in sealed covers in the office of **Bank of Maharashtra Corporate Cell ,LokmangalPune**.on or before **29/06/2018 by 4.00 p.m.**
2. Tenders which do not contain the stipulated EMD or that do not fulfil any of the conditions mentioned herein, shall be rejected.
3. Fluctuations in the prices of any materials or equipment or labour etc. shall not be taken into account either for compensation for damage or for extras. The validity of the tender for acceptance shall be 60 days after submission of the tender. Validity of rates will be for a period of 6 months after the dated submission.
4. Watch and ward in respect of all plants and machinery, materials etc. at site for use in work shall be the contractor's responsibility.

5. **The contractor shall have to make his own arrangements to house his labour and staff and for their services and at no cost use the Bank's premises to house his staff & labourers.**
6. All instructions regarding the execution of work shall be received from the Architects/ Bank only. Any other instruction issued directly to the contractor by anyone else shall not be binding on the Bank.
7. During execution of work the contractor must check his work with the drawings. In case of any discrepancy between the actual site conditions and that detailed in the drawings, the matter should be brought to the notice of the Architect/his representative before executing the work. The contractor shall be responsible for all the errors in this connection and will have to rectify all defects at his own cost, failing which the Bank reserve all right to get the same rectified at the risk and cost of the contractor.
8. The contractor entrusted with the work shall indemnify the Bank and the Architects against theft, mishaps in construction and injury to workmen, damage to person's property etc. He shall make good the damage at his own expense.
9. **The Bank's, shall have the power to omit or cancel, add/or alter any item of work without assigning any reason whatsoever and no claim for compensation for damage will be entertained for such omissions, alterations, additions and cancellations other than taking in account the cost involved for such changes to be plus or minus, and the cost shall be arrived at by the Architects taking into consideration the market rates, site conditions, etc.**
10. Time is the essence of the work. All the works shall have to be completed within **45 days** from the date of issue of work order (Appendix -A). **If the work is not completed within the aforesaid period the contractor shall pay the Bank and the Bank shall be entitled to deduct from the money due to the said contractor the sum of Rs.5,000/- per day of delay , subject to a maximum limit of 10% of the contract amount.**
11. The contractor shall maintain satisfactory progress of work as well as maintain the desired standard of workmanship. He shall submit fortnightly progress reports to the Architect & Bank in the format approved by the Bank/Architect. If in the opinion of the Architect/ Bank the progress is unsatisfactory and/or the workmanship is unsatisfactory, the Architects shall advise the Bank to take possession of the work in as and where condition with 7 days' notice to that effect. The Bank shall then complete the entire work and rectify all the defects at the contractors cost and consequences.
12. In case the Bank /Architects are not satisfied with the quality of materials used by the contractors, they reserve the right to reject such materials/work and direct the contractor to procure such supplies such agencies they deem fit.

13. It is agreed that if the works are delayed (1) by force major or (2) by reasons of any exceptionally inclement weather or (3) by reason of loss or any damage by extensive fire not caused by an act or a default on the part of the part of the contractor, by earthquake or civil commotion, strikes or lockouts affecting any of the trade employed upon the works then the Bank shall make fair and reasonable extension of time for completion of works Upon the happening of any such event , causing delay, the contractor shall immediately give notice thereof in writing to the Bank in all such eventualities agrees, without accepting any contractual obligations in this behalf, to assist the contractor to the utmost extent possible to meet the situation. If no such notice as mentioned above is given within 7 days of happening of such event, no consideration for extra time on account will be given. No claim for damage or compensation will be entertained on this account and the decision on Bank/Architects will be final and binding on all parties.
14. The contractor shall submit the bills for payments along with detailed statement showing the actual works carried out under different heads of items in the format specified by the Bank. Minimum value of the work for interim payment shall be **Rs.10,00,000/-** The bills for nonperishable materials on site may also be submitted and the payment by the Bank against the same shall be to the maximum extent of 75% of the value of these materials, solely at the discretion of the Bank. Bills submitted in any format other than that specified below by the Bank shall not be considered. The contractor will not be paid any interest on delayed payments.

**BILL FORMAT**

Tender Item No.	Description of Items (At least 2 lines)	Units	Tender Quantity	Executed Quantity	Rate	% Work Done	Amount

**NOTE : ALL QUANTITIES IN THE BILL SHOULD BE IN CUMULATIVE. ALL MEASUREMENTS SHOULD BE IN THE ORDER OF TENDER SEQUENCE. AND STRICTLY IN THE BELOW MENTIONED FORMAT ONLY.**

*MEASUREMENT FORMAT*

Tender Item No.	Description of Item & Location against each Measurement taken	Nos .	Lengt h	Breadt h/widt h	Height	Quantit y	Remark s

15. The contractor shall clear the site of work as per the instruction of the Bank/ Architects. The site of works shall be cleared of all men, material etc. belonging to the contractor. The site shall be delivered in broom clean and neat condition immediately after the job is completed. In case of failure by the contractor, the Bank shall have the right to get the site cleared at the risk and cost of the contractor.
16. The contractor shall not without the written consent of the Bank / Architects assign the agreement or sublet any portion of works.
17. **The quoted rates shall be all inclusive and cover the cost of all materials, freight, all types of taxes including GST ,WCT, octroi, duties, royalties, erection, construction, testing of material samples brought for approval, setting up mock samples for approval, tools and tackles, plant and equipment, supervision, overheads, profit and any other expenditure incurred for completion of work as per drawings and specifications.**
18. Wherever required, the Bank / Architects shall instruct the tenderer for supply of samples of items, erection of mock ups, as the case may be, and upon approval of the same, the items shall be fabricated and completed by the contractor (with or without modifications as the Architects shall instruct). The offer by the tenderer should be inclusive of the entire expense for the same.
19. The final bill from the contractor shall not be excepted under any circumstances without full & satisfactory completion of all the items of works. Any work found defective or wrongly carried out and / or as instructed by the Architects, should be rectified or replaced by the contractor at his own expense, prior to the submission of the final bill. It is to be expressly noted that no final bill will be held valid in the event of non-rectification of the defective or wrongly carried out items and completion date shall not be extended on this account under any circumstances. Defects liability period will be effective from the day of satisfactory & full completion of all items of works or as certified by the Architects.
20. In the event of work being executed on holidays and during or beyond the normal office working hours which might be required for the completion of the work within the stipulated time, utmost care to be taken not to disturb the normal working of the office, neighboring offices if such a situation exists. The contractor should take a prior permission of the Architects / Bank for the same.
1. While executing the work, considerable amount of shifting and re - shifting of several furniture items is likely to be involved. It is also likely that some items may be required to be temporarily shifted elsewhere in the premises or on any other floors. The contractor is to do the same & no extra payment against these works shall be done for by the Bank.
2. The contractor shall visit the site & get acquainted with the site conditions, access to the site, local traffic regulations, local authority regulations, availability of materials, labour tax structure etc. before submitting the tender and quote the rates accordingly. No extra charges/increase in rates shall be allowed on account of any of these or any other accounts.

3. The contractor shall have a qualified & competent supervisor on the site all the time.
4. The contractor and/or his authorized representative will attend all the meetings whenever called for and the decision taken in the meeting by Architects representative / owners representative / consultant will be final & binding on the contractor.
5. The contractor shall extend all necessary help to the agencies of associated works like A.C. works, fire detection works and works to be carried out by the Bank agencies, in such a manner that they can carry out their works smoothly and the whole finished work must appear absolutely integrated. Nothing extra shall be paid on this account what so ever.
6. All wood cutting, major planning, loose furniture items etc. shall be done by the contractors at their workshop and only assembling work shall be carried out at site.
7. The drawings should not be scaled & only written dimension are to be followed. Large scale details take precedence over small scale drawings. In case of any ambiguity, conflict of interpretation, generally the provisions giving more vigorous interpretation shall prevail and the Architects decisions / interpretation in this regard shall be final and binding on the contractor.
8. In case the local municipal authorities such as ward office raise objections in matters of water/electricity consumption, debris disposal etc. the contractors shall solve the matter at their end, without involving or putting financial liability on the Bank.
9. Contractor should make all his arrangements for temporary water & power supply at his own cost at site.
10. The contractor shall be bound to carry out extra items of works and wherever possible, the rate for extra item shall be derived from the rate already quoted, otherwise the rate shall be worked out at cost of material + wastage + labour + taxes + transportation + 20 % towards overheads, profit.
11. The rates shall be entered in figures as well as in words.
12. The payment shall be made in the following manner.
  - i) Interest free advance, subject to a maximum of 20% of the contract amount against furnishing a Bank Guarantee for equivalent amount valid for the period of contract and drawn on any Nationalized Bank. The advance shall be recovered from running bills on a pro rata basis.
  - ii) Maximum to the extent of 75% of the nonperishable materials cost brought to site subject to verification from purchase bills showing cost of materials which are to be enclosed with the running payments bills solely at the discretion of the Bank.
- i) Running Account bill (minimum value **Rs. 10,00,000/-** )

- iv) 5% retention money retained from the running bills shall be retained till the successful completion of the Defects liability period of **12months**. The contractor shall submit his running bills for payment concerning the work executed or materials delivered on the site to the Architect. This will be certified by the Architect for payment within 7 days from the date of submission of the bill.

The Architect will not certify any application for payment to any contractor if there is :

- a) Defective items of work still uncorrected.
  - b) Any claims or liens filed against the contractor for failure to pay materials, labour on sub-contract amount due or reasonable evidence that indicates probable filing of such claims.
  - c) Damage to another contractor's work or material or both.
  - d) A reasonable doubt that the contract cannot be completed successfully.
  - e) Over payment to the contractor in any manner.
33. When the work is completed in all respects, the contractor shall intimate in advance & in writing to the Architect and the Bank to take the possession of the same. The work shall not be considered virtually complete until the Bank and the Architect have jointly inspected the work and certified in writing that this has been completed.
34. Unless otherwise instructed, the contractor shall insure the works and keep them insured comprehensively, against loss or damage by fire, riots and /or earthquake and flood at his cost @ 125 % of the contract value for a period up to 3 months after the completion of the project. The insurance must be placed with a company approved by the Bank in the joint names of the Bank and contractors for such amount and for any further sum if called to do so by the Bank. All the Bank supplied items forming a part of Erection contract shall basically constitute these further sums once they are handed over to the contractor from the Bank's stores. The contractor shall deposit the policy along with all amendments and the receipts for premium paid with the Bank within 10 days from the date of issue of work order unless otherwise instructed.
1. All quantities mentioned in the BOQ are approximate and contractor will not claim any damages for increase/ decrease in profit on account of variation in the final BOQ.
  2. All disputes of differences of any kind whatsoever which shall at time arise between the parties hereto touching or concerning the works or the execution or maintenance thereof this contract or the construction remaining operation or effect thereto or the rights or liabilities of the parties or arising out of or in relation thereof whether during or after determination for closure or breach 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 Appointing Authority who shall be appointed for the purpose by the Bank be referred for adjudication to a sole Arbitrator to be appointed as herein after provided.

If the dispute is not redressed within 30 days from the date of reference by a party, the parties may appoint an Arbitrator on mutual consent and if a single Arbitrator cannot be appointed on mutual consent, then each party may appoint an Arbitrator who in turn may appoint a third and the dispute may be resolved by the Arbitrators appointed as per provisions of Arbitration and Conciliation Act. The Award of the Arbitration shall be final and binding on both the parties.

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

The work under the contract shall, however, continue during the arbitrator proceedings and no payment due or payable to the contractor shall be within on account of such proceedings.

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

The Arbitrator 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 a 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 by each parties. The costs of the reference and of the award including the fees, if any, of the Arbitrator who may direct to and by whom and in what manner, such costs or any part thereof shall be paid and may fix or settle the amount of costs to be paid.

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

Subject to aforesaid the provisions of the Arbitration Act 1940 or any statutory modification or re-enactment thereof and the rules made there under, and for the time being in force, shall apply to the arbitration proceedings under this clause.

In all cases where the amount of the claim in dispute is Rs. 75,000/- (Rupees seventy-five thousand only/-) and above, the arbitrator shall give reasons for the award.

It is also a term of the contract that if contractor(s) do/does not make any demand for arbitration in respect of any claim(s) within 90 days of receiving intimation from the Bank/Architect that the bill after due verification is passed for payment of a lesser amount, or otherwise, the contractor's right under this agreement to refer to arbitration shall be deemed to have been forfeited and the Bank /Architect shall be relieved and discharge of their liability under this agreement in respect of such claim(s). Further, it is agreed that for the purpose of this clause, such notice is deemed to have been received by the contractor(s) within 2 days of posting of the letter by the Bank/Architects or when delivered by hand immediately after receipt thereof by the contractor(s) whichever is earlier. Further, a letter signed by the

officials of the Bank / Architect that letter was so posted to the contractor(s) shall be conclusive.

I / We hereby declare that I/We have read and understood the terms and conditions and that we shall abide by them if the work is awarded to us.

**Date :**

**Seal & Signature of Tenderer,**



## SPECIAL CONDITIONS OF THE CONTRACT

1. ORDER OF PREFERENCE:

If any discrepancy is noticed between the clause under special conditions and general conditions of the contract, the special condition shall take precedence over the general conditions.

2. INSPECTION OF DRAWINGS:

Before fitting the tenders the contractor will have to check up all drawings and schedule of the quantities and will have to get immediate clarification from the bank of any point that he feels is vague or uncertain. No claim for damage or compensation will be entertained on this account.

3. CONTRACTOR TO SITE:

Each tenderer, before submitting his tender shall visit the site of the work so as to ascertain the physical site conditions, prices, availability and quality of materials according to the specifications before submitting the quotations. No excuse regarding non-availability of compensation will be entertained on this account.

4. Bank will supply water to the contractor for any purpose.

5. ELECTRICAL SUPPLY:

The Bank will allow a tapping from connection already existing at the site. The contractor will have to fix his own meter and actual place of work. The charges of electric consumption including necessary amount for the connection will be borne by the contractor's case of non-availability of above electric supply the contractor shall make his own arrangement.

6. The whole of the work as described in the contract (including the schedule of quantities, the specifications and all drawings pertaining thereto) and as advised by the bank from time to time is to be carried out and completed in all its parts to the entire satisfaction and all carried out and completed in all its parts to the entire satisfaction of the Bank/Engineer and the consultant. Any minor details referred to in this contract are to be included in this contract.

Rates quoted in the schedule shall be inclusive of all frights taxes such as Octroi, sales tax, Surcharge, royalties etc. As well transportation so as to execute the contract as per the rules and regulations of a local bodies State Government and the Government of India any statutory increase in levies. Octroi, realities etc. by Government over the above considered at the time of tendering would be opened a paid by the owner. The quoted rates shall be firm for the period of completion plus authorized extension plus three months. The rates quote in the tender should include all charges for.

A) Labour maintenance fixing. arranging, cleaning, making good hauling etc.

B) Plants double scaffolding, framework, English ladder ropes, nails spikes tools materials and workman like protection from weather temporary supports platform and the maintenance of the same.

C) Covering for the walling and other works during inclement weather or strikes or whenever directed as necessary.

D) All temporary canvas lights. Tarpaulin, barricades work sheds etc.

E) All starts and steps any other requisite of the works.

F) All such temporary weatherproof shade at such places and in such manner approved by the consultant for the storage and protection of the maternal against the effects of sun and rain.

G) All such temporary fences, guards, approaches and the roads are may be necessary for the contract works and to safeguarding the public.

H) No tools and plants shall be issued by the Bank under the contract.

I) The rates quoted by the tenderers in the schedule of probable will be deemed to be for the finished work.

#### 7. CONTRACT AGREEMENT

The contractor will have to enter into any agreement on a stamp paper of **Rs. 500** in the triplicate of the contract bound in the tender. The cost of stamp paper will bear by the contractor.

#### 8. SCHEDULE OF QUANTITIES NO CLAIM BECAUSE ACTUAL QUANTITIES DIFFER FROM PRELIMINARY STATEMENT.

A schedule of probable quantities in respect of each work and specification accompany these conditions. The schedule of probable quantities is liable to alterations by omission, deductions or additions at the discretion of the bank, the quantities of the various kind of work to be done, material to be furnished under this contract which have been estimated and are set forth in the proposal or agreement or all particulars and are only for the purpose of comparing on a uniform basis the bids offered for the works under this contract. The contractor agrees that neither the Bank nor the consultant nor any of the employees or agents thereof shall be held responsible if any of the estimated quantities shall be found to be not even approximately correct in the construction of the works and that he will not assert that there was any misunderstanding in regards to the character size and type of work to be done or the kind or amount of the materials to be furnished or work to be done. Further the contractor shall make no claim for anticipated profits for loss of profit or for damages because of a difference between the quantities of the various kinds of the works to be done or materials actually delivered and the estimated quantities by Bank or the consultant.

9. **ACCESS OF INSPECTION;**

The contractor is to provide an access at all times during the progress of works and the maintenance period means of access with laded gangways etc. and the same as directed for the inspection or measurement of the works by the consultant on his representative or bank.

10. **DIMENSIONS:**

Figured dimensions are in all cases to be followed and in no case should be scaled. Large-scale details take precedence over the small drawings. In case of discrepancy the contractor is to ask for explanation before proceeding with the work.

11. **PROGRAMME OF THE WORK AND PROGRESS REPORTS**

The contractor should furnish along with his tender a PERT chart based on the master PERT chart enclosed with the tender. The master chart indicates the time factor within the successful contractor will be expected to complete the works as entrusted to him in its entirety. The contractors are to supply details to fit into the master PERT chart indicating their detailed operation of the construction and the dates of which the various materials will arrive at the site and be installed, based on time of completion as fifteen weeks. The contractor on starting the works shall within a month furnish to the bank a detailed program for carrying out the work stage by stage in the stipulated time. A Gantt chart of individual work shall be maintained showing the progress week by week. The contractor shall submit to Consultant/Bank a week progress report stating the number of skilled and unskilled labours employed on the works, working hours effected quantity of work done during the period.

12. OFFICERS STORES ON THE SITE

- A) The contractor shall provide for necessary storage on the site in a specified area for all materials which is likely to deteriorate by the action of the sun, rain or other materials, cause due to exposure in such a manner that all such, materials, tools etc. shall be duly protected from damage by weather or any other cause. All such stores shall be cleared away and the ground left in good and proper order on completion this contract unless otherwise expressly mentioned therein.
- B) No area at the site will be allotted to the contractor for constructing his labour camp. However, depending on the availability a small area may be given to the contractor temporarily for the purpose of fabrication store and the site office. It will be noted that no skilled or unskilled laborer's shall remain at the site for the purpose of residing except security personal that may be requiring for watch and word.

14. FACILITIES TO SUB CONTRACTOR AND OTHER CONTRACTOR

- A) The contractor is to allow for general attendance upon sub contractors including the free use of plant and scaffolding and is to allow their operatives the use of latrines VC'S mess rooms shed and covered space for plant or storage of the materials etc.
- B) The contractor shall give full facilities and cooperation to others contractors employed by the Bank and affording them reasonable opportunity for introduction and storage of their materials and the execution of theirs works and the property connecting and coordinating without dispute between the various contractors.

15. TESTING OF WORKS AND MATERIALS AND PREPRATION OF SAMPLES

The contractor shall, if required by the Consultant/Bank, arrange to the test materials and/or portions of the works at his own cost in order to prove their materials and/or portions of the works at his own cost in order to prove their soundness and efficiency. If they any such test the work of portions of the work of the portions of the works are found in the opinion of the consultants/Bank to be defective or unsound the contractor shall put down the same at his costs.

16. NOTICES

The contractor shall give all notice and pay all fees and shall comply with all Acts and regulations for the successful completion of the contract works.

17. MEASUREMENT TO BE RECORDED BEFORE WORK IS COVERED UP.

The contractor shall take joint measurement with the Bank/consultants representative before covering up or otherwise placing beyond the reach of measurement any of items of work. should the contractor neglect to do so. the same shall be uncovered at the contractor's expenses or in default thereof, and no payment or allowance shall be such work of the material with which the same was executed.

**18. WORKS AT NIGHT**

If the contractor is required to work at night in order to complete the work within the time schedule. the contractor shall provide and maintain at his own cost sufficient lights to enable the work to proceed satisfactorily without danger. Approaches to the site also shall be sufficiently lighted by the contractor. No extra payments will be made for the night work

**19. WORKS ON HOLIDAYS:**

No works shall be done Sunday or holiday that may be notified by the Bank without the specific sanction in writing of the Bank of his representatives.

**20. ACTIVE WHERE THERE IS NO SPECIFICATION**

In case of any class of work over which there is no specification mentioned the same shall be carried out in accordance with the latest Indian standard specification subject to the approval of the Consultant/Bank.

**21. REPORTING OF ACCIDENT TO LABOUR**

The contractor shall be responsible for the safety of person employed by him on the works and shall report serious accident to any of them, however and wherever occurring on the works to the Bank/Consultant who shall make every arrangement to render all possible assistance. This shall be without the prejudice to the responsibility of the contractor under the Insurance Clause of the General conditions.

**22. CLEARING THE SITE OF WORKS:**

The contractor shall clear the site of works as per the instructions of the Consultant/Bank. The site of work shall be cleared of all men, materials, sheds etc. belonging to the contractor. The site shall be delivered in clean and neat conditions as required by the Consultant/Bank within a period of one week after the job is completed. In case of failure by the contractor the Bank will have the right to get the site cleared at the risk and cost of the contractor to the satisfaction of the Consultant/Bank.

**23. OCCUPATION OF PARTIALLY COMPLETED PORTION BY THE BANK**

The Bank shall be entitled to and at liberty to occupy even the partially completed portion thereof by themselves or through their agents and servants if they so desire. Necessary extension of time for completing the work shall, however be granted to the contractor but he shall have no claim for any compensation whatsoever due to delay involved in completing the work.

**24. TYPOGRAPHY OR CLERICAL ERRORS**

The bank's clarifications regarding partially omitted particulars or typographical or clerical errors shall be final and binding on the contractor.

**25. INFORMATION TO BE SUPPLIED BY THE CONTRACTOR**

The contractor shall be furnish the Bank the following

- A) Detailed industrial static regarding the labourers employed by him etc.
- B) The power of attorney, name and signature of this authorized representative who will be in charge of the execution of the work.
- C) A list of technically qualified persons employed by him for the execution of his work.
- D) The total quantities and quality of materials used for the work.

**26. WAGES OF LABOUR EMPLOYED BY THE CONTRACTOR**

The contractor shall pay all labour employed by him at rates by him at the commencement of the contract with the previous written approval of the engineer. All wages shall be paid in full and without any deductions whatsoever at the approved rates and for the full time actually worked during the wages period. The engineer or such other officers may inspect the wages books master books and other labour records of the contractor. In the event of the report of the inspecting officers showing that the proper rates of wages are not being paid or that in any manner whatsoever the dealings between the contractor and his labour are not satisfactory the engineer shall pass such orders upon the report as he considers desirable and those orders shall final and binding upon the contractor.

**27. EXTRA ITEM/DEVIATIONS:**

The contractor shall not commence work in respect of any extra items deviations without obtaining prior approval of the Bank in writing. The contractor shall then immediately submit the rate analysis for such time, with necessary data to support the rate quoted. The rate shall then be settled by the Bank before incorporation the items in the interim bills. The pricing will be done as per the estimated requirement of materials and labour including their cost plus 20% to cater for the overheads and profits of the contractor. No interim bill shall contain any items for which the rates are not settled.

**28. INSURANCE POLICIES**

The contractor shall not commerce/any work site until all the insurance policies, as required under clause of the general conditions of the contract, have been submitted to the Bank.

**29. INDEBTEDNESS AND LIENS:**

The contractor agrees to furnish the Bank from time to time during the progress of the work as requested, verified statements showing the contractor's total outstanding

indebtedness in connection with the work covered by the contract. Before final payments made the Bank may require the contractor to furnish the connection with the contract if during the progress of work. the contractor shall allow any indebtedness to acquire to sub-contractors or other shall fail to pay or discharge same within five days after demand then the Bank may withhold any money due to the contractor until such indebtedness is paid to apply the same towards the discharge thereof.

### 30. INDEPENDENT CONTRACTOR

The contractor agrees to perform this contract as an independent contractor and not as a sub contractor agent or employee of the Bank.

### 31. WORK PERFORMED AT THE CONTRACTORS RISKS

The contractor shall take all precautions necessary and shall be responsible for the safety of the work and shall maintain all lights, guards, signs temporary passages or other protection necessary for the purpose. All works shall be done at the contractor risks and if any damage shall result from fire or from other cause. the contractor shall promptly repair or replace such loss or damage free a from all expenses to the Bank. The contractor shall be responsible for any loss or damage to material tools or other articles used to held for use in connection without damage to any work or property of the Bank or others and without interference with the operation of the existing machinery or equipments if any.

### 32. MATERIALS SUPPLIED BY THE BANK

The Bank reserves its right to supply, issues any/all the material used in the said work at the specified marker as decided by the Architect/Contractor. Bank also reserves its right to change, alter the specifications of the material used in the specification. If Bank/Architect decide to do so the subsequent rates of items using these changes material shall be calculated base on the declared formula for extra items. if the Bank supplies any material, the contractor must satisfy themselves that the same conform to the specifications. If the contractors have any complaint about the said materials or the quality thereof, the contractors before using the said materials must communicate in writing all their objections to the contractors, before using the said materials. After communicating in all their objections to Consultant/Bank who will give their final decision & the same shall be binding on the contractor. Should the contractor fail to do so, they will deemed to have satisfied themselves as to the quality and the suitability of the said materials for being used in the contractor will be in the same position as if the contractors themselves had purchased the said materials. Refer the system of working when Bank issue the basic material used in the specifications i.e. Annexure 10. New system Note & Material Supplied by the Bank.

### 33. INSURANCE

The contractor shall provide adequate insurance cover at his cost for the Bank supplied material issued to the contractor and stored at the site by him for use if the work. The above coverage also includes the materials stored by the owner at the site for issue to the contractor. The insurance cover shall mean insurance against causes including Act of God.

#### **PREAMBLE TO SPECIAL CONDITIONS OF THE CONTRACT**

General,

The tender drawings, designs and specifications are more indication of the nature and scope of the proposed work. The tenders as a specialized contractor in the specific field is at liberty to modify them for the purpose of obtaining greater efficiency. economic and safe for the proposed installation and submit his/their own drawings designs, specifications and schedule of quantities and rates as he/they may consider proper, independently.

The drawings, design and specifications accepted by the tenderizers or submitted by him/them together with the tender shall constitute part of the contract document.

The tenderizers must obtain for himself on his own responsibility and at his own expenses all information which may be necessary for the purpose of filing this tender and for entering into a contract for the execution of the same and must examine with all local conditions and all the bye laws, rules and regulations of the various authorities and matters pertaining thereto.

This is intended to be a performance-based contract whereby the contractor will be liable to execute the work on the basis of the paints and design offered to him and the plans or designs hereby given and acceptance by him. The contractor will have to guarantee for and proper performance of the work agreed to be so erected and installed by him. The contractor shall be paid his bills from time to time or an 'on Account' basis and the payments so made shall be adjusted against the money becoming due and payable to him at the agreed at the conclusion of the contract if the work erected and installed under the contract if found to be giving the due and proper performance.

#### **APPENDUM TO SPECIAL CONDITIONS OF THE CONTRACT**

1. Please note that prices shall be firm for the duration of the contract plus all authorized extensions of the time plus three months period after completion of work. All rates will be treated as including all taxes. Octrio duties levies excise including turnover tax sales tax surcharge on S T etc.



2. The contractor is to furnish the interior work so as to serve as guidelines for working out the rate analysis for extra/deviated terms. These basis rates will be all inclusive to be rejected.
3. The contractor is to quote for all the sections of the bill of quantities are approximate. They are likely to vary. Any variation in quantities will be binding on the contractor.
4. Variations in quantities. The quantities mentioned in the bill of quantities are approximate. They are likely to vary. Any variation in quantities will be binding on the contractor.
5. Bank reserves the right to divide and distribute the work section wise, item wise and floor wise.
6. Submission of samples the samples of all the materials, polishes stipple paint etc. shall be submitted to Bank/Consultants in large size stipple pant panel for their approval before commencement of work. If samples are not produced to the satisfaction of Architect the contractor is likely to be asked to approach other sub-contractor of repute and proven ability to prepare the sample of required workmanship This decision, in that case shall be binding on the contractor.
7. Bank/Architects reserve the right to ask the contractor to prepare mockup of any for their before proceeding with the work
8. In case of non-availability of any material mentioned in the list of approved material mentioned in the list of approved and manufactures the contractor shall intimate the Bank/Consultant in writing enclosing the details specification and samples of the material suggested by him before proceeding with the work that material. Such alternative material shall be used only after Consultant's/Bank's written approval.

**FORM OF AGREEMENT**

THIS AGREEMENT made this    day of    , 2018 between

\_\_\_\_\_ (here in after called “the Bank”) of the one part and whose registered office is situated at

\_\_\_\_\_ and

\_\_\_\_\_ here in after called (“the contractor”) of the other part and whose registered office is situated at

\_\_\_\_\_ WHERE AS the Bank is desirous of

\_\_\_\_\_ (hereafter called “the work”) at

\_\_\_\_\_ and has caused Drawings and Schedule of Quantities and Rates showing and describing the work to be prepared by or under the direction of **M/s.Ketan Gadgil studio Architects, 6 Chandraprabha Apartments, Prabhat Road, Pune.**

AND WHEREAS the contractor has supplied the Bank with a fully priced copy of the said Schedule of Quantities and Rates (which copy is hereinafter referred to as “the Bill of Quantities”) AND WHERE AS the said Drawings (hereinafter referred to as “the Contract Drawing”) and the Bill of Quantity (BOQ) have been signed by or on behalf of the parties hereto : AND WHERE AS the Contractor has deposited the sum of Rupees

\_\_\_\_\_ with the Bank for due performance of this Agreement.

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

1. For the consideration herein after mentioned the Contractor will upon and subject to the Conditions annexed carry out and complete the work shown upon the contract Drawings and described by or referred by or referred to in the BOQ and in the said conditions.
2. The Bank will pay the Contractor the sum of Rupees

---

(here under referred to as “the Contract value” or such other sum as shall become payable here under at the times and in the manner specified in the said Conditions.

3. The term “the Architect” in the said conditions shall mean the said M/s. **KETAN GADGIL STUDIO** or in the event of his death or ceasing to be Architect for the purpose of this Contract such person as the Bank shall nominated for that purpose, not being a person, not being a person to whom the contractor shall object for reasons considered to be sufficient by an arbitrator appointed in accordance with said conditions. Provided always that no persons subsequently appointed to be the Architect under this contract shall be entitled to disregard or overrule any certificate or opinion or decision or approval or instruction given or expressed by the Architect for the time being.

1. The said condition and appendix thereto shall be constructed as forming part of this Agreement, and the parties hereto shall respectively abide by, submit themselves to the Conditions and perform the agreements on their parts respectively in such Conditions contained.

AS WITNESS the hands of the said parties.

Signed by the said  
in the presence of

BANK

**Witness**

Name :

Address :

Signed by the said  
in the presence of

CONTRACTOR

Witness

Name :

Address :

## 1. ANNEXURE NPRE CONTRACT INTEGRITY PACT

### General:

This pre-bid pre-contract Agreement (hereinafter called the Integrity Pact) is made on \_\_\_\_ day of month of \_\_\_\_\_ 2018, between on one hand, Bank of Maharashtra through authorized official Shri. \_\_\_\_\_, Assistant General Manager, Corporate Services Department, Bank of Maharashtra (hereinafter called the "CLIENT", which expression shall mean and include unless the context otherwise required, his successors in office and assigns) of the First Part and M/s \_\_\_\_\_ represented by Shri. \_\_\_\_\_ Proprietor (herein called the "BIDDER" which expression shall mean and include unless the context otherwise requires his successors and permitted assigns) of the Second Part.

WHEREAS the CLIENT proposes to procure (Name of the Stores/Equipment's/Item) and the BIDDER is willing to offer/has offered the stores and

WHEREAS the BIDDER is a private company/public company/Government undertaking/partnership/registered export agency/LLP, constituted in accordance with the relevant law in the matter and the BUYER is a Information Technology Department of Bank of Maharashtra

NOW, THEREFORE,

To avoid all forms of corruption by following a system that is fair transparent and free from any influence/ prejudiced dealings prior to, during and subsequent to the currency of the contract to be entered into with a view to:-

Enabling the CLIENT to obtain the desired said Equipment/product/services at a competitive price in conformity with the defined specifications by avoiding the high cost and the distortionary impact of corruption on public procurement, and

Enabling BIDDER to abstain from bribing or indulging in any corrupt practice in order to secure the contract by providing assurance to them that their competitors will also abstain from bribing and other corrupt practices and the CLIENT will commit to prevent corruption, in any form by its officials by following transparent procedures.

The parties hereto hereby agree to enter into this Integrity Pact and agree as follows:

### Commitments of the CLIENT:

- 1.1. The CLIENT undertakes that no officials of the CLIENT, connected directly or indirectly with contract will demand, take a promise for or accept directly or through intermediaries any bribe, consideration gift reward favor or any material or immaterial benefit or any other advantage from the Bidders either for themselves or for any person, organization or third party related to the contract in exchange for an advantage in the bidding process, bid evaluation contracting or implementation process related to the contract.

- 1.2. The CLIENT will, during the pre-contract stage, treat all BIDDERS alike, and will provide to all BIDDERS the same information and will not provide any such information to any particular BIDDER which could afford an advantage that particular BIDDER in comparison to other BIDDERS.
- 1.3. All the officials of the CLIENT will report to the appropriate Government office any attempted or completed breaches of the above commitments as well as any substantial suspicion of such a breach.
2. In case any such preceding misconduct on the part of such official(s) is reported by the BIDDER to the CLIENT with full and verifiable facts and the same is prima facie found to be correct by the BUYER, necessary disciplinary proceedings or any other action as deemed fit, including criminal proceedings may be initiated by the BUYER and such a person shall be debarred from further dealings related to the contract process. In such a case while an enquiry is being conducted by the CLIENT the proceedings under the contract would not be stalled.

### **COMMITMENTS of BIDDERS**

3. The BIDDER commits itself to take all measures necessary to prevent corrupt practices, unfair means and illegal activities during any stage of its bid or during any pre-contract or post contract stage in order to secure the contract or in furtherance to secure it and in particular commit itself to the following:-
  - 3.1. The BIDDER will not offer, directly or through intermediaries, any bribe gift consideration reward favor, any material or immaterial benefit or other advantage, commission fees, brokerage or inducement to any official of the CLIENT, connected directly or indirectly with bidding process, or to any person organization or third party related to the contract in exchange for any advantages in the bidding, evaluation contracting and implementation of the contract.
  - 3.2. The BIDDER further undertakes that it has not given, offered or promised to give, directly or indirectly any bribe, gift, consideration, reward, favor, any material benefit or other advantage commission fees brokerage or inducement to any officials of the BUYER or otherwise in procuring the Contract or forbearing to do or having done any act in relation to the obtaining or execution of the contract or any other contract with the Government for showing or forbearing to show favor or disfavor to any person in relation to the contract or any other contract with Government.
  - 3.3. BIDDERS shall disclose the name and address of agents and representatives and Indian BIDDERS shall disclose their foreign principals or associates.
  - 3.4. BIDDERS shall disclose the payments to be made by them to agents/brokers or any other intermediary, In connection with bid/contract.
  - 3.5. The BIDDER further confirms and declares to the CLIENT that the BIDDER is the original manufacturer/integrator and not engaged any individual or firm or company whether Indian or foreign to intercede, facilitate or in any way to recommend to the BUYER or any of its functionaries whether officially or unofficially to the award of the contract to the BIDDER, nor has any amount been paid, promised or intended to be paid to any such individual firm or company in respect of any such intercession facilitation or recommendation.
  - 3.6. The BIDDER, either while presenting the bid or during pre-contract negotiations or before signing the contract shall disclose any payments he has made is committed to or intends to make to officials of the CLIENT or their family members, agents, brokers or any other intermediaries in connection with the contract and the details of services agreed upon for such payments.

- 3.7. The BIDDER will not collude with other parties interested in the contract impair the transparency fairness and progress of the bidding process, bid evaluation contracting and implementation of the contract.
  - 3.8. The BIDDER will not accept any advantage in exchange for any corrupt practice unfair means and illegal activities.
  - 3.9. The BIDDER shall not use improperly, for purposes of competition or personal gain, or pass on to others any information provided by the BUYER as part of business relationship, regarding plans, technical proposals and business details including information contained in any electronic data carrier. The BIDDER also undertakes to exercise due and adequate care lest any such information is divulged.
  - 3.10. The BIDDER commits to refrain from giving any complaint directly or through any other manner without supporting it with full and verifiable facts.
  - 3.11. The BIDDER shall not instigate or cause to instigate any third person to commit any of the actions mentioned above.
  - 3.12. If the BIDDER or any employee of the BIDDER or any person acting on behalf of the BIDDER either directly or indirectly, is a relative of any of the officers of the CLIENT, or alternatively, if any relative of an officer of the CLIENT has financial interest/stake in the BIDDER's firm, the same shall be disclosed by the BIDDER at the time of filing of tender.

The term 'relative; for this purpose would be as defined in Section 6 of the Companies Act 1956
  - 3.13. The BIDDER shall not lend to or borrow any money from or enter into any monetary dealings or transactions, directly or indirectly, with any employee of the CLIENT.
4. **Previous Transgression**
- 4.1. The BIDDER declares that no previous transgression occurred in the last three years immediately before signing of this Integrity Pact, with any other company in any country in respect of any corrupt practices envisaged hereunder or with any Public Sector Enterprise in India or any Government Department in India that could justify BIDDER's exclusion from the tender process.
  - 4.2. The BIDDER agrees that if it makes incorrect statement on this subject, BIDDER can be disqualified from the tender process or the contract, if already awarded, can be terminated for such reason.
5. **Earnest Money (Security Deposit)**
- 5.1. While submitting commercial bid, the BIDDER shall deposit an amount \_\_\_\_\_ (to be specified in RFP) as Earnest Money Deposit/ Security Deposit, with the CLIENT through any of the following instruments:
    - 5.1.1. Bank Draft or Pay Order in Favor of **Bank of Maharashtra**
    - 5.1.2. A Confirmed guarantee by an Indian Nationalized Bank, promising payment of the guaranteed sum to the CLIENT on demand within three working days without any demure whatsoever and without seeking any reason whatsoever. The demand for payment by the BUYER shall be treated as conclusive proof of payment.
    - 5.1.3. Any other mode or through any other instrument (to be specified in the RFP)
  - 5.2. The Earnest Money/Security Deposit shall be valid up to a period of five years or the complete conclusion of the contractual obligations to the complete satisfaction of both the BIDDER and the CLIENT, including warranty period, whichever is later.

5.3. In case of the successful BIDDER a clause would also be incorporated in the Article pertaining to Performance Bond in the Purchase Contract that the provisions of Sanctions for Violation shall be applicable for forfeiture of performance Bond in case of decision by the BUYER to forfeit the same without assigning any reason for imposing sanction for violation of this Pact.

5.4. No interest shall be payable by the CLIENT to the BIDDER in Earnest Money/Security Deposit for the period of its currency.

## 6. **Sanctions for Violations:**

6.1. Any breach of the aforesaid provisions by the BIDDER or any one employed by its or action on its behalf (Whether with or without the knowledge of the BIDDER) shall entitled the CLIENT to take all or any one of the following actions, wherever required :-

6.1.1. To immediately call of the pre contract negotiations without assigning any reason or giving any compensation to the BIDDER. However, the proceedings with the other BIDDER(s) would continue.

6.1.2. The Earnest Money Deposit (in pre-contract stage) and /or Security Deposit / Performance Bond (after the contract is signed) shall stand forfeited either fully or partially, as decided by the CLIENT and the CLIENT shall not be required to assigning any reason therefore.

6.1.3. To immediately cancel the contract, if already signed, without giving any compensation to the BIDDER.

6.1.4. To recover all sums already paid by the CLIENT, and in case of an Indian BIDDER with interest thereon at 2% higher than the prevailing Prime Lending Rate of State Bank of India, while in case of a BIDDER from country other than India with interest thereon at 2% higher than the LIBOR. If any outstanding payment is due to the BIDDER from the Buyer in connection with any other contract for any other project such outstanding payment could also be utilized to recover the aforesaid sum and interest.

6.1.5. To encash the advance bank guarantee and performance bond/warranty bond, if furnished by the BIDDER, in order to recover the payments, already made by the BUYER, along with interest.

6.1.6. To cancel all or any other Contracts with the Bidder. The Bidder shall be liable to pay compensation for any loss or damage to the CLIENT resulting from such cancellation/rescission and the CLIENT shall be entitled to deduct the amount so payable from the money(s) due to the Bidder.

6.1.7. To debar the BIDDER from participating in future bidding processes of the Bank for a minimum period of five years, which may be further extended at the discretion of the CLIENT.

6.1.8. To recover all sums paid in violation of this Pact by Bidder(s) to any middleman or agent or broker with a view to securing the contract.

6.1.9. In cases where irrevocable letter of credit have been received in respect of any contract signed by the CLIENT with the BIDDER, the same shall not be opened

6.1.10. Forfeiture of Performance Bond in case of a decision by the CLIENT to forfeit the same without assigning any reason for imposing sanctions for violation of this Pact.

## 7. **Fail Clause:**

7.1. The Bidder undertakes that it has not supplied / is not supplying similar products/systems or subsystems/ services at a price lower than that offered in the

present bid in respect of any other Ministry/department of the Government of India or PSU and if it is found at any stage that similar products/systems or sub systems was supplied by the Bidder to any other Ministry/Department of Government of India or a PSU at a lower price, then that very price, with due allowance for elapsed time, will be applicable to the present case and the difference in the cost would be refunded by the BIDDER to the CLIENT, if the contract has already been concluded.

**8. Independent Monitors:**

- 8.1. The CLIENT has appointed Independent Monitors (hereinafter referred to as Monitors) for this Pact in consultation with the Central Vigilance Commission (Names and Address of the Monitors to be given).
- 8.2. The task of the Monitors shall be to review independently and objectively whether and to what extent the parties comply with the obligations under this Pact.
- 8.3. The Monitors shall not be subject to instructions by the representatives of the parties and performs their functions neutrally and independently.
- 8.4. Both the parties accept that the Monitors have the right to access all the documents relating to the project/procurement, including minutes of meetings.
- 8.5. As soon as the Monitor notices, or has reason to believe, a violation of this Pact, he will so inform the Authority designated by the CLIENT.
- 8.6. The BIDDER(s) accepts that the Monitors has the right to access without restriction to all Project documentation of the CLIENT including that provided by the BIDDER. The BIDDER will also grant the Monitor upon his request and demonstration of a valid interest, unrestricted and unconditional access to his pocket documentation. The same is applicable to subcontractors. The Monitor shall be under contractual obligation to treat the information and documents of the BIDDER/subcontract(s) with confidentiality.
- 8.7. The CLIENT 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 parties. The parties will offer to the Monitor the option to participate in such meetings.
- 8.8. The Monitor will submit a written report to the designated Authority of CLIENT in the Department/within 8 to 10 weeks from the date of reference or intimation to him by the CLIENT /BIDDER and, should the occasion arise, submit proposals for correction problematic situations.

**9. Facilitation of Investigation**

In case of any allegation of violation of an provisions of this Pact or payment of commission the CLIENT R or its agencies shall be entitled to examine all the documents including the Books of Accounts of the BIDDER and the BIDDER shall provide necessary information and documents in English and shall extend all possible help for the purpose of such examination.

**10. Law and Place of Jurisdiction**

This pact is subject to Indian Law. The place of performance and jurisdiction is the seat of the CLIENT

**11. Other Legal Actions:**

The actions stipulated in this Integrity Pact are without prejudice to any other legal action that may follow in accordance with the provisions of the extant law in force relating to any civil or criminal proceedings

**12. Validity:**



12.1. The validity of this Integrity Pact shall be from date of its signing and extend up to 5 years or the complete execution of the contract to the satisfaction of both the CLIENT and the BIDDER/Seller, including warranty period whichever is later, in case BIDDER is unsuccessful, this Integrity Pact shall expire after six months from the date of the signing of the contract.

12.2. Should one or several provisions of this pact turn out to be invalid; the remainder of this Pact shall remain valid. In this case, the parties will strive to come to an agreement to their original intentions.

13. The parties hereby sign this Integrity Pact at \_\_\_\_\_ on \_\_\_\_\_

CLIENT  
Name of the Officer:  
Designation:  
Corporate Services Department  
Bank of Maharashtra

(Office Seal)

Place \_\_\_\_\_  
Date \_\_\_\_\_

Witness:  
1 \_\_\_\_\_  
(Name & Address) : \_\_\_\_\_

2 \_\_\_\_\_  
(Name & Address) : \_\_\_\_\_

BIDDER  
Proprietor  
(Office Seal)

Witness:  
1 \_\_\_\_\_  
(Name & Address) : \_\_\_\_\_

2 \_\_\_\_\_  
(Name & Address) : \_\_\_\_\_

**5. List of Drawings for Execution.**

<b>Sr. No.</b>	<b>Dwg. No.</b>	<b>Drawing Title</b>
1.	Tender Dwg-1	Electrical Layout
2.	Tender Dwg-2	Electrical Layout
3.	Tender Dwg-3	-----
4.	Tender Dwg-4	-----

**6. 'APPENDIX - A'**

1. Date of Commencement : **4 days** from the date of work order.
2. Date of Completion : **45 days** from the date of commencement.
3. Liquidated Damages : 10% of the accepted contract value per day of delay or part thereof subject to maximum of 15% of the accepted contract value.
4. Defects liability period : **12 months**.
4. Value of works for interim Payment : **Rs. 10,00,000.00**
6. a] Earnest Money : **Rs -----/-** to be paid along with the tender at the time of submission of the tender.
7. Retention money : **-- %** of value of work (in addition to Earnest money) to be deducted from the running bills.
8. Retention after virtual completion : **---** % of the total billed (certified) amount towards defect liabilities, to be refunded on successful completion of defects liabilities period of 06 months.
9. Period for honouring certificates : **7 working days** (after receipt of contractors bills in the specified format along with certificate for payment from the PMC / Architects to the Client)
10. Period for honouring final bill : **30 working days** after receipt of certificates from the Architect.

**We agree to the terms incorporated in the above 'Appendix -A'**

**Date :**

**Signature of Contractor(s)**

**GENERAL SPECIFICATIONS:**

Contractor may be required to prepare mock up of different type at the site as per consultant's drawings, specifications and instructions necessary modifications free of cost of consultant Bank approval.

Generally,

This specification is for work to be done item to be supplied and materials to be used in the works as shown and defined on the drawing's described herein, all under suspension and to the satisfaction of the Architect's/Adobe

The workmanship is to be the best available and of a high standard, use must be made of special tradesmen in all aspects of the works a allowance must be made in the rates for so doing.

The materials and items to be provided by the contractor shall be the best of their respective kinds approved by the Bank/Architect in according with any samples which may be submitted for approval and generally in accordance with the specified in the specifications, where materials products are specified in the specifications and/or bill or brand, trade name or catalogue reference the contractor will be required to obtain approval of the Bank/Architect before using a material. The contractor shall produce all in voices, vouchers or receipts for any material if call upon to do so by the Architects/Banks.

Samples of all materials are to be submitted to the Bank/Architects for their approval and thereafter to the Bank for their approval before it contractor orders or delivers in bulk to the site. Samples together with their packing are to be provided free of charge by the contractor should any materials be rejected. they will be removed from the site at the contractor's expenses. All samples will be removed from the site the contractors expenses. The Architects/Banks before proceeding with the work will retain all samples. Should it be necessary to prepare shop drawings then four copies of such drawings shall be submitted for the approval of the Architect' s Bank who will retain two copies at the contractors' expenses.

ANNEXURE

Contractors Liability And Insurance Summary.

---

S. No Nature and scope value of Insurance Validity period of Insurance

---

1. Loss of damages to works to 125% of the contract Up to the issue of via or any part  
there of an all amount Virtual completion

Material site from any amount certificate.

Whatsoever,

2. Damages loss or injury for one accident or series of -do-

Property of the Bank or consultant accident or series of accidents

To any person including the Bank up to a limit of Rs.51 lacks.

Or consultant or his agents and servants.

3. Claims under the workman compensation -do- -do-

Act the contract Labour Act 1970.

Signature of Contract.

## ANNEXURE-H- SAFTY CODE

### 1. SCAFFOLDING

- 1.1 Suitable scaffolding shall be provided for workman for all that cannot safely be done from the ground or from solid construction except such short period of work as can be done safely with ladders. When a ladder is used an extra majdoor shall be engaged for carrying material as well as suitable foot holds and hand holds shall be provided on the ladder an inclination shall be given not steeper than 1/4 horizontal and 1 vertical.
- 1.2 Scaffolding or staging more than 12 above the floor. Swung or suspended from overhead support or erected with stationary support shall have a guard rail properly attached breached or otherwise secured at least 3 feet high above the floor of the platforms of such scaffolding staging and extending along the entire length or the outside the ends there of with only such opening as may be necessary for the delivery of the materials, such scaffolding or staging shall be fastened as to prevent it from swaying from the building structure.
- 1.3 Working platform gangways should be constructed that they should not sag unduly or unevenly and if the height of the platform of the gangway or the stairway is more than 12 feet above the ground level and/or floor level they should be closely boarded. Should have adequate width and should be suitably fenced as described in 2 above.
- 1.4 Safe means of access shall be provided to all working platforms and other working places. Every ladder shall be securely fixed no portable single ladder shall be over 30 feet in length while the width between side rails in ring ladder shall be in no case less than 11.1 inches for ladder up to and including 10 feet in length for longer ladders this width should be increased at least 1/4 inch for each additional foot length uniform stop spacing shall not exceed 12" adequate precaution shall be so stacked or placed as to cause danger or inconvenience to prevent danger from electrical equipments. Nonmaterial on any of the sites of work shall be so stacked or placed as to causes danger or inconvenience to any person or the public. The contractor shall also

provide all necessary fencing and lights to protect the protect the public from accident and shall be bound to bear the expenses of defence of every suitable action or other proceedings of law that may be brought by any person and to pay any damages and cost which may be awarded in any such suitable action or proceeding to compromise any claims by any such person.

ANNEXURE-H  
SAFTY CODE

1. SCAFFOLDING

- 1.1 Suitable scaffolding shall be provided for workman for all that cannot safely be done from the ground or from solid construction except such short period of work as can be done safely with ladders. When a ladder is used an extra mazdoor shall be engaged for carrying material as well as suitable foot holds and hand holds shall be provided on the ladder an inclination shall be given not steeper than 1/4 horizontal and I vertical.
- 1.5 Scaffolding or staging more than 12 above the floor. Swung or suspended from overhead support or erected with stationary support shall have a guard rail properly attached breached or otherwise secured at least 3 feet high above the floor of the platforms of such scaffolding staging and extending along the entire length or the outside the ends there of with only such opening as may be necessary for the delivery of the materials, such scaffolding or staging shall be fastened as to prevent it from swaying from the building structure.
- 1.6 Working platform gangways should be constructed that they should not sag unduly or unevenly and if the height of the platform of the gangway or the stairway is more than 12 feet above the ground level and/or floor level they should be closely boarded. Should have adequate width and should be suitably fenced as described in 2 above.
- 1.7 Safe means of access shall be provided to all working platforms and other working places. Every ladder shall be securely fixed no portable single ladder shall be over 30 feet in length while the width between side rails in ring ladder shall be in no case less than 11.1 inches for ladder up to and including 10 feet in length for longer ladders this width should be increased at least ¼ inch for each additional foot length uniform stop spacing shall not exceed 12” adequate precaution shall be so stacked or placed as to cause danger or inconvenience to prevent danger from electrical equipments. Nonmaterial on any of the sites of work shall be so stacked or placed as to causes

danger or inconvenience to any person or the public. The contractor shall also provide all necessary fencing and lights to protect the public from accident and shall be bound to bear the expenses of defence of every suitable action or other proceedings of law that may be brought by any person and to pay any damages and cost which may be awarded in any such suitable action or proceeding to compromise any claims by any such person.

## **SPECIFICATION ELECTRICAL WORK**

### **Section I**

#### **Light & Power Wiring**

##### **1.0 Concealed Point Wiring / Conducting**

##### **A.0 Conducting :**

The specification described here refer to concealed conduit wiring required for light/Power socket. Under the scope of point wiring, contractor has to supply and fix from switchboard to all points, specified approved make of 16 gauge heavy duty ERW grade black enameled MS conduit of sizes specified in bill of quantities and heavy duty accessories like bends, junction boxes, MS pull boxes of specified sizes with tip MS covers, check nuts etc. Complete conduit shall concealed in walls, ceiling etc. by chiseling i.e. ziti cutting with mechanical cutter, installation before slab cutting. All accessories and joints shall be fixed by threaded method and in no circumstances pin type accessories to be used. The capacity of conduit shall be as per IS732/1962 revised up to date.

The conduits pipes in chase shall be installed by means of GI saddles fixed maximum at 400 mm distance. Fixing of standard bends shall be preferably avoided and instead as far as possible conduit shall be bind-using conduit offset machine with long radius bend. All conduits in switchboard/power boxes should be connected by threaded method by check nuts. After installation of conduits, steel wires of appropriate sizes shall be installed to enable pulling of wires after completion of entire conducting. (All joints shall be painted with two coats of red oxide paint. All conduits where lengths are cut should be filed to remove sharp edges at the ends to avoid damage to wires.) The conducting method/specifications are applicable for point, fan, exhaust fan, bell point, two way point, group control point, power socket wiring as specified in bill of quantities.

##### **A.1 Wiring :**



The point wiring shall be carried out by supply and laying 660/1100 V graded PVC insulated copper wires of specified sizes (preferably 2 x 1.5 Esq.copper). These two wires are to be used for phase and neutral. An earth wire of 660/1100 V insulation grade of 1.5 Esq. Copper shall be used for all points. Complete wiring shall be strictly done as per specifications and drawing details. Point shall be individually wired with phase, neutral (unless specified otherwise) earth wires and all point neutrals shall be lopped at switchboards (on connector in switchboard). All earth wires shall be fixed on switchboard box and connected with main earth wire brought along with circuit wire. In no circumstances neutral should be loosely connected by twisted joint. Entire precautions should be taken while drawing wires inside conduit to ensure safe installation. Regular pull boxes of MS are to be provided maximum at 4.5 Mtr. Length for ease in maintenance. The maximum number of wires per conduit shall be as per specifications given herein and no attempt shall be made to accommodate more wires.

Under the scope of point wiring Contractor has to quote considering With Material Job Basis for installation of point with all accessories like junction boxes, bends, conduits, pull boxes, ceiling rose, round hylam plates (white color) wind wires. The switchboard supply is to be considered only if it is specified in the bill of quantities, however installation work of switchboard shall be considered as included in point wiring. The call bell points, which will be done in a similar way as in point wiring and shall be paid in similar way. Fan point wiring shall be done in same way and with the same material like point wiring. Fan regulator is not to be provided in the rate for point wiring but the space for the same is to be provided in the switchboard. Rates include fixing of fan hook box of 12.5 cm diameter and 7.5 cm height of SWGHS sheet 5 / Anchor bolt for fan hook. Contractor has to quote considering with material job basis for installation of switch board, power point with all accessories like junction boxes, bends, tee, elbow, PVC boxes on surface, MS boxes concealed in walls, switch, socket plates as specified in list of approved make.

## **2.0 Concealed Circuit Wiring / Mains wiring :**

### **B.1 Conducting :**

Supply and Fixing of specified diameter 25/32/mm HGMS 16 Gauge black enameled ERW grade conduit of approved make with heavy duty accessories like bend, junction box, MS pull boxes with covers, adapters, checkouts etc. The junction boxes to be used should be 62 mm deep for wall. Separate conducting shall be done for mains/circuit wiring and in no

case it should be mixed with point wiring conduits. Complete work has to be performed as per the Drawings and specifications.

The work includes supply & laying of conduit, pull boxes, bends in slab casting and wall conduits shall be installed after chasing of wall i.e. ziri cutting with mechanical cutter. The switchboard should be fitted with conduit on double check nut mounting. Conduit in chase shall also be fixed with GI staples maximum at 400 mm distance. Complete hardware like conduit reducers, bends, junction boxes to be fitted with thread type joint. All joints should be painted with red oxide primer.

## **B.2 Wiring :**

The scope of wiring shall be from distribution board to each switchboard; power socket and complete wiring shall be done with 660V/1100V grade PVC insulated flexible copper wires. Independent wires with color code shall be used for phase, neutral and earth. Wire sizes shall be used as per bill of quantities and drawings. Mains wiring also includes termination of wires at DB and Power outlet including providing ferrules at both ends for identification. Looping of power sockets shall be done only where it is specifically mentioned.

Earthling wires shall be deducted type and is to be used for each power point/switch board/flat DB. For a three phase circuit two earth wires of specified sizes are to be used from meter panel to power points. The earth wire is to be terminated at earthling link of panel and power outlet box.

## **C. Colour Code of Wiring**

Phase Wire	Red
	Yellow
	Blue

(As per schedule of wiring given along with drawings)

Neutral Wire	Black
Earth Wire	Green
Point Wiring	Colour of point wire (phase) shall be same as of circuit coming to that switchboard.

## **2.0 LT Distribution Board :**

Scope of work under this item shall cover installation, testing, commissioning of LT distribution boards of 500 V 50 HZ operations at site including u unloading and shifting. The required frame for panels is to be prepared with respect to each panel dimensions from fabrication agency working at site.

### **3.0 Cable Laving in Underground Trench :**

The cable trench in ground has to be prepared by excavating soft mudroom/black soil/hard mudroom as per details given in trench drawing with specifically maintaining clear dimensions of trench i.e. (width/depth/length). The rates for excavation shall be quoted after visiting site.

After complete excavation of length of trench, the sand bed of 50 to 100 mm thickness has to be created in bottom of trench. Fine Nomads river sand has to be used for this purpose and it is to be ensured that this sand does not contain stone/gravel etc.

The sand bed has to be even and a pre inspection of this shall be arranged with consultant/Engineer-in-Charge. The cables are than to be laid in these trenches. Cable drums have to be shifted from stores to site of lying by the contractor and hydraulic jack shall be arranged for lifting of drums. Sufficient manpower shall be arranged for u uncoiling/laying of cables in order to avoid damage to cable. The work includes supply of cables.

Length of cable piece has to be properly measured and cut from the drum. The cables are to be laid in the trenches maintaining minimum spacing of 100 mm (or as specified in the drawings). After laying of all cables in trenches, cable indemnifications tags are to be installed at every Mtr. Distance. These tags are of aluminium flat (minimum size of 25x3mm) and shall bear punch mark of cable number. The cable number shall match to that of given in cable schedule and in case of any alterations prior to permission of Consultant has to be obtained. After this sand bed of 100mm has to be prepared over cable. The bricks are then to be kept on the edges of cable over sand s per drawing and details. The backfilling of soil and proper levelling, length compacting shall be done. After completion of complete work, the route markers of cable trench have to be installed along the trench. The size of route marker shall be minimum dia 100mm x 3mm bolted on MS angle of size 40mm x 20mm x 5mm. These markers are to be grouted in ground approximately and every turning has to be provided with separate route market.

For every road crossing entry in building etc. Cable sleeves RCC/GI in specified sizes are to be provided as per drawing and details. Complete work shall be done to ensure reliability of system. The work is including supply of cables.

#### **4.0 Cable Laying on Trays/Walls :**

The Cable trays are to be fabricated out of MS angle of given sizes. The trays has to be fabricated in two parts i.e. cable trays and its supports.

Complete fabrication work of tray/support has to be done by straightening of angles, fabricating specifies sizes, removal of sharp edge and installation of trays on supports. The tray has to be I installed in such a way that same level is maintained on one runner (unless specified otherwise). The 'T' section, bend has to be long radius type and shall be minimum 16 xs outside dia of biggest size cable. The supports at such sections have to be provided in addition to that shown in the drawing. Complete cable trays are to be painted with one coat of red oxide/two coats of black synthetic enamel paint.

After completion of above work cable lying has to be started from LT panels to machines/Power outlets. The pre measurement of cable length has to be carried out and only after ensuring proper cutting length is all right. The cable is to be laid o trays with minimum spacing of 75mm (or unless specified in the drawing). After laying of all cables, 'AL' tags are to be I installed along with 'AL' clamps (made from Aluminium strip of minimum 25mm x 2mm thickness). The spacing between such clamps shall be 450mm and that between tags is same as specified in (1). For installation of cables in walls, MS/GI spacers shall be used. Spacers shall be MS/GI flat of 25 x 3 mm unto 16mm cable and 40 x 6 mm above 16 Sq.mm cables. The spacing be 200mm and it shall be fixed with GI machine screws.

Complete work has to be executed ensuring safe installation.

#### **5.0 Cable End Termination :**

The cable end termination of all cable has tube done by a skilled cable jointer (to be arranged by Contractor) using proper size cable glands lugs, ferrules of approved make. Contractor shall supply all such required material. The cable glands shall be installed by punching appropriate size hole on gland plate. No extra hole shall be punched unless specified otherwise. The gland plate has to be refitted properly to ensure verminproofners of panels.

The lugs shall be of 'Copper' and shall be crimped using crimping tool compression type. Above 50 Sq.mm. hydraulic crimping tools are to be arranged by the Contractor. Before crimping lugs contact enhancement paste has to be provided or approved make. The termination is then to be carried out ensuring tightness/proper contact at the point of termination.

#### **6.0 Fans and Fixtures :**

Connections to the Fans, Fixtures and Exhaust Fans shall be with 3 x 1.5Sq.mm. copper conductor PVC insulated round flexible cord. Connection charges shall exclude all sundry material required for erection like connector strip. PVC tape, M/C and wooden screws of GI, round blocks, wooden plates etc.

The installation charges for Fans, Exhaust Fans shall include installation and connection of regulator, installation of exhaust fans shall include grouting of frame or tightening of frame with Anchor bolts as per site condition.

Wall fans shall be fixed on 15mm thick teak wood plate of 300 mm x 180mm size and shall be grouted /fixed on wall by 6 nos. Anchor bolts of 1/2" dia of coach screw as per site conditions.

All work shall be carried out neatly and as per the direction and to the satisfaction of Consultant. All fans and fixtures shall be connected with earth wire.

#### **7.0 Hanging type Tube light Fixtures :**

Supply Installation, testing, fixing and commissioning of all types of tube light fixtures up to 750mm from ceiling/roof trusses etc. With 19mm dia (3/4") 1.6mm thick conduit pipe duly painted after installation with 2 coats of synthetic enamel paint of white colour.

Nickel chrome brass sockets shall be heavy-duty type approved by consultant used to hold the conduit to be fixed on wooden round block. Wooden block shall be fixed on ceiling directly or on existing MS/PVC junction box (as per site condition) all sundry material to be included like screw, checkouts, PVC tape etc. Round blocks shall be painted by 2 coats of synthetic enamel paints of white colour approved by Consultant.

#### **8.0 Earthling :**

Under the scope of earthing work earthing of HT Yard, street lighting, control and distribution boards, individual equipment, machines etc. Is covered. The earthing plate electrode of 600mm x 600mm x 6mm hot dipped plate or 30mm x 300mm x 3mm copper of 600mm x 600mm x 6mm copper or pipe electrode as per specification has to be installed. The plate has to be connected with 2 No. 45mm x 5mm GI or 25mm x 5mm copper or 45mm x 5mm copper strip with help of 2 No. GI/Brass bolts/nuts and is to be suspended in excavation pit along with perforated GI pipe for watering. The plate is to be then covered with common salt, coat powder, black soil as per drawing and specifications.

After back billing the PCC in 1:2:4 is to be applied in an area of 300mm and brick masonry chamber (thickness of chamber wall 200mm wall) has to be constructed. The chamber cover and the frame of 300mm x 300mm of CI shall be supplied and grouted in brick masonry. The chamber cover shall have lifting hook and shall have space in frame from proper placement. The watering fennel is to be installed over watering pipe. The test link between earthing pit clamps and running earthing strip is to be provided for testing.

After completion of work, resistance of earth pit has to be measured 4 pin ethmod and results shall be recorded/handed over to the Bank/consultant in 1 sets.

The scope of work includes supply of hot dipped galvanized iron strips/wire as per details and drawings. the GI strip supplied for purpose shall be continuous (minimum single length acceptable in 10 Mtr.) The strip has to be straightened without damaging galvanizing. The strip has to be welded by overlapping and three side continuous welding joint. These joint shall then be cleaned and jute covering has to be provided (wherever strip is buried in ground.) After this black bituminous anti corrosive paint has to be applied on all joints. Same process has to be adapted for all tapings also.

In case if earth wire is required tube connected on strip with the help of bolt, GI bolts, nuts are to be used along with covering and painting.

The earthing strip wherever indicated in drawings, has to be supplied in ground at a depth specified in drawing. The earthing strip shall be covered with black soil and in no case sand has to be used around strip.

### **Telephone system**

The wires and cable used for telephone system shall be as mentioned in list of approved make and PVC insulated and sheathed 0.5 sq.mm. tinned copper conductor wires of various pairs should be laid in previously laid metal conduits.

The telephone wiring shall be carried out in the under mentioned manner confirming to be particular specifications.

- a. In concealed system including providing and laying conduits, bends, junction boxes, pull boxes, hardware etc.
- b. The installation generally will be carried out in conformity with the norms and rules lie down by the Post and telegraph department of Govt. of India and IS specifications.

The rates shall be on the basis of supply and fixing of dummy conduits and supply, installation, testing and commissioning of telephone cables as described above on perimeter basis and of tag blocks and distribution frames on per unit basis.

#### Statutory approvals

All statutory approvals from electrical inspectors and MPEB are to be obtained by the electrical contractor at no extra cost only the official payment made in the govt. Treasury for the first inspection of the electrical inspector will be reimbursed to you against official payment receipt.

The work also includes getting connection sanctioned from MSEB for individual meter for office/flat and common meters at no extra cost. Only official charges to be deposited for deposit of MSEB shall be reimbursed against treasury slip.

#### IS Specifications

The following Indian Standard Specification revised as on date will apply to the equipment and contract.

a.	Switch fuse units on cubicle switchboards	IS-4047	1967
b.	Switchgears bus bars	IS-375	1963
c.	distribution boards	IS-2675	1966
d.	Enclosure for low voltage switchgears	IS-2147	1962
e.	PVC cables	IS-1554	1964
f.	Tabular filament lamps	IS-2410	1963

g.	Tungsten filament lamps	IS-415	1963
h.	Ceiling fans	IS-374	1966
i.	Industrial Light fittings	IS-1771	1961
j.	Water tight Electric light fittings	IS-3553	1966
k.	Steel boxes for enclosure of electrical accessories	IS-5113	1984
l.	Fittings for rigid conduits	IS-2667	1964
m.	Rigid steel conduits for electrical wiring	IS-9537	1984
n.	Accessories for rigid steel conduits for electrical wiring	IS-3873	1966
o.	Switch socket outlet	IS-4615	1968
p.	Three pin plugs and socket	IS-1293	
q.	Switches for domestic and similar purpose	IS-3854	1966
r.	PVC wires	IS-694	1964
s.	Call bell and buzzers	IS-2268	1966
t.	Earthing	IS-3043	1966
u.	Electrical wiring installation	IS-732	1963
v.	Switches	IS-3072	1965
w.	Lighting protection	IS-2309	1969

Indian electricity rule 1956 amended as on date and date of completion.

Contractor.



### Testing and commissioning

Before the lighting /power installation is made alive the contractor shall carry out tests enumerated below in presence of Engineer -in-charge or his authorized representative. The Contractor and the tests results recorded on approval performed shall arrange all testing equipments necessary to carry out the tests. Nothing extra shall be payable for carrying out testing.

1. Measure insulation resistance of each circuit without lamps being in place and it should not be less than 5 mega ohms to earth.
2. Before energizing, measure insulation resistance of the cable from phase to phase and that from phase to ground. Insulation resistance of the bus bar at the lighting panel from phase to phase and phase to ground shall be measured before energizing the panel and should comply latest Indian Standards Institution.
3. Current Voltage of all phase shall be measured at the lighting panel busbar with all circuits on with fixtures and also in and all switchboards.
4. check the earth continuity for all sockets outlets. A fixed relative position of the phase and neutral connection inside the socket shall be established for sockets.
5. The earth electrodes shall be tested for earth resistance by means of standard earth tester. The resistance between the earthing system and the general mass of earth shall not be greater than 1 ohm.
6. while crossing the expansion joints in building conduits shall be provided with flexible pipe and shall not be more than 250 mm, at both the ends of conduit proper flexible couplings shall be provided and earth wire shall be properly connected to earthing terminal of coupling.

7. Contractor should quote after site visit only. In case for cable trench, street light pole pit, earthing pit etc. or any place where contractor has to dig the earth in hard strata or rock he has to do so at quoted rates only for item. No blasting shall be allowed for such digging.
8. For earthing of street light tubular pole earth sprit shall be used. Out of 8 SWG GI wire as per standard specifications.

**Annexure - 1**

Maximum Capacity of M/s. conduits for Simultaneous Drawing in of PVC insulated copper conductor cables of 660 V/1.1 KV Grade (Flexible)

<b>Size Conduit Cable Conductors Nominal Area Sq.mm.</b>	<b>20mm Maximum Number of Cables</b>	<b>25mm</b>	<b>32mm</b>	<b>40mm</b>
1.5	4	6	10	14
2.5	2	4	8	10
4	2	4	6	8
6		2	4	6
10			2	4
16			2	4
16			2	4

No steel conduit less than 20 mm in dia shall be used  
Specifications of the conduit will be as per following.

<b>Nominal Size</b>	<b>Outside Dia</b>	<b>Tolerance Outside Dia</b>	<b>Minimum inside Dia for medium conduit</b>
20	20	0.3	16.9
25	25	0.4	21.4
32	32	0.4	27.8
40	40	0.4	35.4

The specification for all conduits shall be as per IS -9537

## **Technical Specifications**

### **Section 2**

#### **LT Panel and Distribution Boards**

##### **Important Instructions**

Tenderer's while quoting for the following enquiry may please take note of the following instructions.

1. The specifications given in following sheets are to be referred with respect to the single line diagram of panel.
2. The dimensions of panel given in drawing indicate clear internal dimensions of cubicle and in no case they shall be considered as total dimensions.
3. The dimensions of panel are given to ensure minimum clearance and space however if the manufacturer feels that the dimensions given needs improvement on higher side he shall consider same and quote accordingly.
4. The manufacturing instructions given in specifications sheets are to be strictly followed.
5. The contractor shall quote inclusive of all taxes/duties/transportation/packing /loading and unloading etc. and no extra charge will be payable on quoted rates.
6. Panel fabricator shall have approval of CPR and TAC.

#### **1.0 LT Panel and distribution boards :**

Scope of work under this items shall cover detailed engineering, fabrication, assembly of switchgears, testing of distribution boards at factory, delivery at site, testing of LT distribution boards for 500 V 50 HZ operation complete. complete panel shall be fabricated at premises of approved vendor where fabrication, hydraulic /power press. 7 tank metal treatment facilities re available. The design of distribution boards shall conform to latest

applicable Indian Standards. Safety codes as per detailed specifications given in bill of quantities.

## **2.0 Energy meter panels :**

These shall be made as per the prevailing norms laid down by the concerned EB division of the area. sizes of meter chambers, slotted angles, transparent acrylic plate for meter reading, cardholder, MCB compartment, locking and sealing arrangement etc. shall all be as per the requirement of MSEB. All other details would be as per above mentioned LT panel and Distribution Board specifications and those given in the schedule of items of the tender. The competent authority of MPEB should be approved the panels.

### **Enclosures :**

The fabrication details of distribution boards shall be worked out on the basis of type (Floor mounted /wall mounted) area of utilization ( on trench/on floor etc.) for free standing distribution board a robust base channel of not less than 10 Gauge with section of 100 x 50 shall be prepared. Complete panel shall be fabricated as per following details.

Door mounting plate of switchgears, vertical compartment sheets	14 gauge
Compartment partition horizontal plates	16 gauge
Gland plates (with minimum 4 no. of fixing bolts )	10 gauge

The panel shall be provided with top as well as bottom gland plate unless specified otherwise. One gland plate shall be made suitable for maximum 4 Nos. of cable, if no. of feeders in particular alley has more cables, then multiple cable glands has to be provided. The panel should be fabricated with separate provisions of busbar chamber, cable alleys, instrumentation and metering units. Facility of front and back maintenance doors shall be provided for every 300 mm vertical hinges on side. The front doors shall have panels door locks operated by key and back doors shall be with bolt type arrangement having locking washers. All doors shall have rubber gaskets along the periphery to ensure dust proof/vermin proof conditions due to larger size of doors are to provide while fabricating doors.

The panel cubical shall be fabricated strictly as per details given in drawing. The panel shall be front operated front maintenance type, unless specified otherwise. The meters

relays, indication lamps shall be provided on front doors with proper cut-outs. The arrangement to mount ACB, SFU shall be made within the panel, however operating handles, etc. shall be mounted on doors. Arrangement for earthing terminals extended flats of AL on both sides to connect 50 x 5 GI earth strips shall be provided on panel.

**Ventilation :**

Ventilation louvers with removable type welded wire mesh are to be provided on sides of panel, backside covers of busbar chamber doors. also on PCC at top of busbar chamber welded wire mesh protected ventilation duct with canopy of sheet shall be provided for proper cooling and to ensure temperature rise within limits as per standards. 3/4" size propeller fan should be fixed on opening at both ends in case of main panel and floor mounted distribution boards.

**Bus Bars :**

High conductivity electrolytic grade Cu /AL alloy of size as per details /specifications conforming to E 91 E IS 5082 shall be used to construct bulbar. The busbar size shall remain same throughout the length of panel up to incomer and only branch sizes are to be different as per requirement and arrangement of outgoing feeders. Maximum current density permissible in aluminium bulbar shall be 0.8 A/Sq.mm. the bulbar shall be provided with hear shrinkable sleeves with appropriate colour code for phase and neutral. The material sleeves shall be non inflammable and self extinguishing type. The bus bar shall be adequately supported by SMC - DMC fingers/supporters, epoxy compound castled in desired no. and size to take care of thermal/mechanical stress during normal and short circuit conditions (50 KVA fault level.)

**Hardware/Miscellaneous items :**

The hardware to be used in panels shall be sine plates and all joints and connections shall be made with galvanized sine coated or cadmium plated high tensile strength steel bolts/nuts/springs washer etc. The make of hardware items shall be UNBREKO/GK.W. All control wires shall be of 1.1 KV grade flexible copper of finolex /Milax make with Dowell / 3 D make copper pin type lugs. The control uses of HRC 2A/4A of English Electric make shall be provided with ferrules for identification of wires. PVC grey casing for wires shall be provided in cubicles. All wires shall be suitably ties with PVC button straps. Appropriate rubber bushes, clamps are to be crossover of control wiring in cubicles etc.

### **Painting :**

After completion of fabrication work, complete fabricated structure shall be thoroughly cleaned to remove traces of grease rust, scale and dust. The seven-tank process for treatment of fabricated structure shall be used. After preparation of fabricated surfaces, the panel shall be painted with one coat of anti-corrosive surface/primer & two coats of synthetic enamel paint.

The finished panels shall be dried in storing ovens in dust free atmosphere to ensure fine quality finish. The paint shall be Berger LuxolHingloss, with light grey colour in matt finish for outside. Inside of panel shall be painted with white paint of Berger Make.

### **Incoming & outgoing termination Arrangement :**

All incoming & outgoing feeders are to have termination arrangement in separate cubicle. The incomer bus extension shall be provided from incomer SFU/ACB/MCCB up to incomer termination chamber. Also be outgoing feeders shall have bush extension up to cable alleys. Sufficient space has to be provided for termination of cable/wire in cable alleys. The feeders below 40A can be provided with flexible cable & ELMEX connectors. All feeder outlets shall be provided with insulated barrier plates between two outgoing.

### **Components :**

The ACB shall be fully draw out electrically spring charged stored emery type provided with mechanical indicators to show 'open', 'closed', 'service', 'test', positions, mechanically tripping buttons etc. The control supply shall be 240V Ac, 6 No. + 6 NC auxiliary contacts shall be **Switch fuse units** :provided 'Red', 'Green', 'Amber' indication lamps shall be incorporated to show 'closed', 'open', 'auto trip', conditions respectively. The interlocks shall be as under.

It shall not be possible to plug in a closed circuit breaker or to draw out a circuit breaker unless it is fully 'plugged in' test or fully 'isolated' position. In test positions, the breaker shall be tested without energizing the power circuit. Whenever specified interlock to avoid paralleling shall be provided. Closing and trip coils shall work under following voltage variations conditions.

Closing Coils	85% to 110% or rated voltage
Trip coils	50% to 110% or rated voltage

For series tripping overloads, short circuits and under voltage trip circuit shall be provided. Stored energy mechanism shall be provided with mechanical indicators to show, charged or discharged conditions. The IDMT, CDG-31, 2 over current and 1 earth fault relay to be provided for incoming MPEB feeder.

The load break switches shall be suitable for manual quick make/break mechanism. Switches handle shall be provided with door interlocking arrangement. Also 'defect' arrangement shall be provided to open the door in switch 'close' position for testing purpose. Fuses shall be HRC link type. Two sets of fuse pullers also shall be providing. All switches shall be selected on the basis of high switching duty rating.

#### **Current Transformer :**

Current transformers shall be cast resin type. The short time withstand rating of CT's shall be equal to that of the associated switchgear for one second.

The protection of CT's shall be 15VA, accuracy class 5P & an accuracy limit factor of 10 unless otherwise specified.

The instrument CT's shall be 10VA, accuracy class 5P & an instrument safety factor of 5.

CT's shall not be directly mounted on the buses. CT's on ACB feeders shall be mounted on fixed portion of compartment.

CT's shall be terminated through terminals/disconnect able links which give help during testing.

Separate CT's shall be provided for protection & metering.

#### **Protective Relays      The relay**

Shall be mounted on front door of the compartment & accessible for setting & resetting from the front. Handiest flag indicators visible from the front shall be provided. The relays shall be mounted with rubber gasket on cut-out of installation. Provision for clapping relay wires on door panels & cubicle shall be made for safety.

**Indicating Instrument :**

These shall be 144Sq.mm. For MEP & 96 Sq.mm. for PDBS, flush mounting type with range as per corresponding feeder. Energy meters shall be suitable for measuring unbalanced loads & shall be provided with all out-going feeders of PCCS. 96 Sq.mm. size CTR ammeters with ASS shall be provided for each out-going feeders. All voltmeter and indications shall be provided with VSS & control fuse.

**Indicating Lamps :**

Indicating lamps shall be of 22.5mm dia LED type & shall be Red, Yellow, & Green colours.

**Push Buttons :**

Push button shall be momentary contact type rated to carry 10A, 240V AC with 2 No. 2 NC contacts for Start/Stop or green & red colours & other suitable colours.

**Earthing :**

An earthing strip of 50 x 6 Sq.mm. size for MEP & 25 x 6 Sq.mm. for PDBS of 'AL' shall be provided in each panel. All the CT terminals shall be earthed by two wires at different places & all metal casting of current carrying components shall be connected to earthing strips. All the hinged doors & PCCC & PDBS shall be earthed through flexible copper wire PVC insulated & crimped at both ends.

**General**

1. Terminal blocks shall be of ELMEX make and of suitable capacity. Control and power terminals shall be segregated.
2. Suitable HYLAM/BAKELITE should be provided of minimum 3 mm size where bus links from busbar chamber and feeder chamber to cable chamber will be terminated.
3. All the components shall be as per the relevant ISS and shall be of highest manufacturing quality and standard. The SFU shall be of AC 23 duty only and ACB shall not have rupturing capacity less than 50 KA.



4. As given in the drawing in case of PCCS all cable chambers and bus chambers and bus chambers are in back of all out going feeders.
5. All the PCCS and PDBS have sufficient quantity of bolted type lifting lugs welded at 50 x 6 angles along the depth of panels.
6. One side of each shipping section should be pasted with gasket.

#### **Tests to be conducted on PCCS on PDBS**

The equipment shall be subject to standard routine test as per IS 2026 1977 on amended up to date.

1. 2.5 KV high pot test with leakage current measurement.
2. Meggar test.
3. Load test by primary injection test kit at 70 % efficiency and capacity of the incomer.
4. Secondary injection test for relays, meters and CT's.
5. Temperature rise test for MEP.
6. Functional Test.

The above tests must be conducted in the manufacture premises in presence of consultants /Bank's representative. The bidder who are not having those testing facility are not entitled to participate in the bid. Protective relays are to be tested/calibrated at installation prior to commissioning. Bank/Consultants shall approve test certificates of the above tests.

#### **Type of Test /Certificates**

The Bidder shall produce following type tests certificate of CPRL.

- a. Short Circuit Test at 41.7 KA fault level.
- b. Temperature rise test.
- c. Degree of Protection test - IP55/IP54
- d. HV test.

#### **Fire Insurance Approval**

The Bidder shall have TAC approval from Tariff Advisory committee and copy of approval shall be enclosed with bid.

### **Inspection :**

The Consultant's representative shall be free to inspect the equipment at several stages to be decided mutually. The equipment shall be dispatched only after the inspection and successful testing at manufacture works.

### **Drawings**

Before starting the manufacture of the equipment, the successful bidder shall have to take approval from the Consultant. Supplier shall rectify any manufacturing done prior to approval or any change in specification. Minimum two sets of drawings sent for every approval and three sets shall be furnished after job completion.

Three sets of operation manuals with the technical leaflets of the components used in the CPC and PBS are to be provided after completion of job.

### **Performance Guarantee**

The equipment covered under the above specification shall be designed, fabricated and tested in accordance with the applicable sections of the latest revisions of relevant Indian Standards (IS) and all International Electro Technical Commission's recommendations (IEC) As well as specifications given in this document.

The PCC & PDBS shall generally confirm to the requirement of the following standards amended up to date.

- a. IS-4237 General requirements of switchgear & control gear for voltage nor exceeding 1000V.
- b. IS-375 Arrangement of busbar, main connection, auxiliaries & wiring.
- c. IS-2516 Requirement of the circuit breakers nor exceeding 1000V, selection & testing.
- d. IS-4047 Specification for heavy-duty air break switches & fuses for voltage not exceeding 1000 V.
- e. IS-2208 Specification for HRC cartridge fuse link up to 650 V.
- f. IS-2507 Indian Standards for current transformers. (part - I/II/III/IV).
- g. IS-4201 Application guide for current transformers.
- h. IS-2959 Specification for AC connectors of voltage not exceeding 1000 V.
- i. IS-1822 Specification for motor starters of voltage not exceeding 1000 V.
- j. IS-5569 Electrical power connectors.

- k. IS-1336 Colour code recommendations for push buttons.
- l. IS-1248 Electrical indicating buttons.
- m. IS-4483 Preferred panel cut-out dimensions.
- n. IS-2147 Degree of protection provided by enclosures for LV switchgears.
- o. IS-3072 Code of Practice of installation & maintenance of switchgears for system voltage not exceeding 1000V.
- p. IES-439 Low voltage switchgear & control gear assemblies.
- q. IS-2032 Graphic Symbols.
- r. IS-8623 Factory built assemblies.

**List of approval make :**

The following make of equipment and material or equivalent as approved by Architect / Electrical cons specify which materials he would be using and get the make and type approved from Architect/Electrical Consultant before exe quality and as per ISI specifications. Contractor has to supply copy of original challan/bills on demand to the Consultant as

<b>Sr.No.</b>	<b>Material</b>	<b>Approved Material / Quality / Suppliers</b>
1	Meters (Ammeter, Voltmeter, Power factor meter, Frequency Meter)	AE / RISHAB / ENERCON
2	Ammeter & Voltmeter Selector Switches	Kaycee / Salzer
3	MCCB	ABB / L & T / Siemens / TC France
4	Connectors	ElemexConnectwell / Saizer / Wag
5	Energy Meters	Simco / GEC / HAVELS
6	Capacitors	KJC / Asian / Momaya Mixed / Dielec
7	MCB (10 KA Fault Level)	MDS Legrand / Merlin Gerin / Datar
8	Connectors	L & T / Elemax
9	Energy Meters	ABB / L & T / Siemens / TC France
10	CTS	AE / AVK cast Resin cts
11	Changeover switch	HAVELS / Helcon
12	CABLE (Electricals)	cci / Finolx / Nicco
13	Cable glands	GEC / Branko
14	Cable Lugs	Dowells / 3 D
15	Wires (FRLS)	RPG / RR kable
16	Telephone Wires	Dalton / RPG / Finolx
17	Enhance CAT 6 Lan Cable	D-link / Finolex
18	Telephone Arm. Cable	Finolex / Dalton (jely filed)
19	Ceiling ring speakers	PHILIPS
20	Speaker Wire	RPG/RR cable

21 PVC conduits and its Accessories  
22 PV casing capping

Precision  
Precision

23 Room switch, sockets  
24 RJ 45 Computer socket outlet  
25 LED Light Fittings fixture  
26 Ceiling fan/wall fan  
27 Exhaust fan

Anchor ROMA/LEGRAND  
D-Link  
PHILIP / Wipro  
Crompton / Almonard  
Crompton / Almonard