

# **ORIENTAL BANK OF COMMERCE**

## **Mumbai Central Circle Office**

18th Floor, Maker Tower-E Wing, Cuffe Parade, Mumbai 400005

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## **TENDER DOCUMENT**

### **PROPOSED ELECTRICAL WORK OF BHANDUP BRANCH & ONSITE ATM**

**Tender No.: OBC/1366/MUMCR/ELECTRICAL/01**

NAME OF THE CONTRACTOR :  
ADDRESS :  
DATE OF SUBMISSION of E-tendering : On or Before Aug 20, 2019 up to 6.00 p.m.  
DATE OF TECHNICAL BID OPENING : Aug 21, 2019 at 11:30 AM..  
DATE OF PRICE BID OPENING : Aug 21, 2019 at 03:00 PM.

### **ARCHITECT**

## **SANKALPA ASSOCIATES**

ARCHITECTS & INTERIOR DESIGNERS

65, GANGADHAR NIWAS, GOKHALE ROAD (N), DADAR, MUMBAI-400 028

## **ORIENTAL BANK OF COMMERCE**

### **CIRCLE OFFICE- MUMBAI CENTRAL**

18th Floor, Maker Tower-E Wing, Cuffe Parade, Mumbai 400005

Use e- portal [www.tenderwizard.com/OBC](http://www.tenderwizard.com/OBC), vendor needs to register on the portal.  
(For New Bidders). Con. No. **Manoj Ku.Dubey. + 91 7666563870**  
**Angraj Thakur. 9113390087.**

To,  
Dear Sir,

### **TENDER NOTICE**

**Sub. :-** E-Tender enquiry for proposed electrical work of BHANDUP BRANCH including Onsite ATM

We hereby invite you to submit your quotation for above mentioned work. The specifications, special conditions of contract and schedule of work to be carried out are enclosed herewith. You are requested to inspect the site and the nature of work prior to submitting the tenders. You are requested to submit your most competitive offer complete in all respect to reach THE DY. GENERAL MANAGER, ORIENTAL BANK OF COMMERCE, MUMBAI CENTRAL CIRCLE OFFICE, 18th Floor, Maker Tower-E Wing, Cuffe Parade, Mumbai 400005 on AUGUST 20 , 2019 online with the name & address of your firm on the left hand bottom corner.

The envelope should be accompanied by an Earnest money Deposit of Rs. 4,500/- (Rupees Four Thousand Five Hundred Only), by Crossed Order A/C. Payee Demand Draft, in favor of ORIENTAL BANK OF COMMERCE. A tender not accompanied by such Demand Draft as Earnest Money Deposit will not be considered. The Earnest Money Deposit of the unsuccessful tenderer will be returned without any interest within fifteen days from the date when the decision for award of work is taken by Bank.

This Earnest Money Deposit shall not bear any interest and shall be forfeited in the event of evasion, refusal or delay on the part of the tenderer to sign & execute the contract on acceptance of his tender.

The rates quoted will include and cover all cost, expenses, liabilities of very description and all risk of every kind to be taken in execution and handing over the work to the Bank. All Taxes, duties and any other taxes applicable and prevailing from time to time on such item for which the same are leviable and the rates quoted by contractor are inclusive of the same.

Each page of the tender shall bear the signature of the bidder over his name stamp.

Bank reserves the right to accept or reject lowest or any other bid in full or in part and/ or accept any bid other than the lowest in full or in part without assigning any reason, whatsoever. No correspondence will be accepted / entered in this connection and Bank's decision shall be final, conclusive and binding on all.

The following document forming a part of tender, are enclosed herewith.

1. Tender Notice
2. Introduction.
3. Special Instructions & conditions.
4. Preamble to B.O.Q.
5. Mode of Measurement.
6. List of Approved Manufacturers for materials.
7. Bill of quantities.

This tender notice shall form part of the contract and non- submission of tender in the above manner will render your offer liable for rejection.

Thanking you,

Yours faithfully,

DY.GENERAL MANAGER  
CO, CENTRAL CIRCLE OFFICE

# INTRODUCTION

1. NAME OF THE CLIENT OFFERING CONTRACT	ORIENTAL BANK OF COMMERCE
2. ARCHITECT	SANKALPA ASSOCIATES
3. SITE ADDRESS	Corpora Building, LBS Road, Rajiv Gandhi Nagar, Bhandup (W), Mumbai 400 078
4. SCOPE OF WORK	ELECTRICAL WORK OF BHANDUP BRANCH & Onsite ATM
5. A. DATE OF DISPLAY ON WEBSITE B. ISSUE OF TENDERS C. SUBMISSION OF E-TENDERS CENTRAL CIRCLE OFFICE D. DATE OF OPENING OF TENDERS	<b>ON AUGUST 7, 2019.</b> THROUGH E TENDERING BY THE BANK BETWEEN 11.00 AM TO 5.00 PM. ON OR BEFORE <b>AUGUST 20, 2019</b> UP TO 3.00 PM. AT ORIENTAL BANK OF COMMERCE, MUMBAI  <b>ON AUGUST 21, 2019 AT 11:30 AM</b>
6. TIME LIMIT FOR EXECUTION	30 days
7. EARNEST MONEY DEPOSIT	Rs. 4,500/-
8. TENDER FEE	Rs.500/--
9. ESTIMATED TENDER COST	Rs.465068/- ( INCLUSIVE OF 18% GST)
10. INITIAL SECURITY DEPOSIT	2% OF ACCEPTED VALUE OF TENDER LESS MONEY DEPOSITED.
11. SECURITY DEPOSIT	8% OF EACH INTERIM BILL VALUE.
12. TOTAL S.D. INCLUDING I.S.D AND RETENTION MONEY	10% OF COST OF WORK
12. DEFECT LIABILITY PERIOD	6 MONTHS FROM DATE OF COMPLETION OF WORK
13. INSURANCE	100% OF CONTRACT VALUE
14. PENALTY OF DELAY	1% OF THE CONTRACT SUM PER WEEK MAXIMUM AMOUNT OF LIQUIDATED DAMAGE WILL BE 10% OF COST OF WORK.
15. PAYMENT OF R.A. BILLS THAN	VALUE OF 1 <sup>ST</sup> RUNNING BILL SHALL NOT BE LESS  40% OF TOTAL CONTRACT AND REMAINING BILLS NOT LESS THAN 30% EACH.

THIS AGREEMENT made this     day of     , 2019 between ORIENTAL BANK OF COMMERCE (hereinafter called “The Bank”) of one part and     of     of having registered office at

(Hereinafter called “the Contractor”) of the other part.

WHEREAS the Bank is desirous of carrying out Electrical work OF BHANDUP BRANCH & ATM. (Hereinafter called “the Work”) and has caused drawings and Bills of Quantities showing and describing the work to be done to be prepared by or under the direction of Architect Shri S. P. Kshetramade of M/s. Sankalpa Associates AND WHEREAS the Contractor supplied the owner with a fully priced copy of the said Bills of Quantities (which copy hereinafter referred to as “the Contract Bills”) AND WHEREAS the said drawings (hereinafter referred to as “the Contract Drawings”) and the Contract Bills have been signed by on or behalf of the parties hereto: AND WHEREAS the contractor has deposited the sum of Rs. 4,500/- with the Bank for due performance of this Agreement.

**NOW IT IS HEREBY AGREED AS FOLLOWS**

1. For the consideration hereinafter 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 to in the Contract Bill and in said conditions.
2. The Bank will pay the Contractor the sum of Rupees     (hereinafter referred to as “the Contract Sum”) of such other sum as shall become payable hereunder at the times and in the manner specified in the said conditions.
3. The term “the Architect” in the said conditions shall mean M/s. Sankalpa Associates or in the event of his death or ceasing to be the Architect for the purpose of this contract or such other person as the owner shall nominate for that purpose, not being a person to whom the contractor shall object for reasons considered to be sufficient by, mentioned in the said conditions. Provided always that no person subsequently appointed to be the Architect under this Contract shall be entitled to disregard or overrule and certificate or opinion or decision or approval or instruction given or expressed by the Architect for the time being.
4. Tender documents containing Notice to the Contractors, Conditions of Contract, Appendix thereto, Special Conditions of contract, Specifications, Schedule of Quantities with the rates entered therein shall be read and studied as forming part of this agreement, and the parties hereto shall respectively abide by and submit themselves to the conditions, stipulations and perform the agreements on their parts respectively in such conditions contained.
5. Time shall be considered as of the essence of this Agreement and the Contractor hereby agrees to commence the work soon after the site is handed over to him as provided for in the said conditions and to complete the entire work within seven days from date of commencement of work, nevertheless to the provisions of extension of time.
6. This agreement and Contract shall be deemed to have been made in and any question or dispute arising out of or in any way connected with this agreement and contract shall be deemed to have arisen in and only the courts in Bombay shall have jurisdiction on to determine the same.

AS WITNESS the hands of the said parties.

Signed by the said  
 In the presence of  
 Witness  
 Name:  
 Address:

BANK

Signed by the said  
 In the presence of  
 Witness  
 Name:  
 Address:

CONTRACTOR

## **TENDER FORM**

The general Terms and Conditions that are more particularly set out herein below for the purpose of appointing contractors for the purpose of carrying out Electrical Work OF BHANDUP BRANCH & onsite ATM of ORIENTAL BANK OF COMMERCE and other ancillary activities which is herein after referred to as “the said work”. The definition and interpretation of the certain classes are more particularly set out hereunder.

### **DEFINITIONS:-**

1. “THE SAID WORK” includes all items of Electrical Work OF BHANDUP BRANCH & onsite ATM of ORIENTAL BANK OF COMMERCE with bill of quantities, general terms & conditions / special conditions / technical conditions.
2. The “BANK” shall mean the “ORIENTAL BANK OF COMMERCE” having its registered address at MUMBAI CENTRAL CIRCLE OFFICE, 18th Floor, Maker Tower-E Wing, Cuffe Parade, Mumbai 400005 and authorized representative(s) of the BANK to discharge all or any of its function.
3. The “CONTRACTOR” shall mean the individual or firm or Company, whether incorporated or not who is assigned the subject work, and shall include the personnel representative/ (s) of such individual person, firm or company of such individuals or firm or Company, successors and permitted assigns.. The work contractor shall include “Sub-Contractor” if expressly permitted by the Bank in writing.
4. The “ARCHITECT / ARCHITECT” means the authorized person or persons nominated by the BANK for the purpose of the contract, who shall inspect, direct, Supervise, measure and issue certificates in respect of the said work and be incharge of the work for the purpose of this contract. It also includes any person claiming through or under them.
5. The “CONTRACT” means instructions to Contractor, Tender, the written acceptance thereof, a form agreement between ‘BANK’ and ‘CONTRACTOR’ (where completed) to execute the works as per conditions and specifications set in this document including Bill of Quantities.
6. The “SPECIFICATION” means specification referred to includes General, Special and Technical specifications (with drawings if any) and any modification thereof or addition thereof as many from time be furnished or approved in writing by the Architect / Bank.
7. The “CONTRACT PRICE” means the sum named in the tender subject to additions or deductions there from as the case may be.
8. The “PLANT & EQUIPMENT” of the contractor shall mean all plants, machinery, equipment, pipe work services and all other things to be provided, erected, commissioned and maintained in accordance with Contract.

### **ELIGIBILITY FOR TENDERING & GENERAL CONDITIONS OF CONTRACT**

1. The tender must be submitted in a sealed cover superscribed with the tender number, the name of the work as given above and the tenderers name & address on the bottom left side of the envelope and handed over to the BANK. Tenders will be received upto 18.00 hrs on **August 20, 2019**.
2. The tenderer should visit the site and acquaint himself with the site conditions and should study all the tender documents carefully and understand the tender contract conditions, specifications etc. before quoting. If there are any doubts they should get clarification in writing.
3. Late tenders i.e. tenders submitted / received after 18.00 hrs on **August 20, 2019** will not be considered.
4. The tender documents are non-transferable.
5. All the entries in the tender documents must be made in English and all entries must be by hand and written ink. If any of the document is missing or unsigned, the tender may be considered invalid by the BANK in its discretion.
6. The tenderer should quote the rate and amount for the assessed quantities (area) of each item. The rates for each item should be written both in figures as well as in words. Erasures, alteration, and overwriting must be avoided. Wrong figures and words, if any, should be scored out and the correct figures and words neatly written authenticated by the signature of the tenderer. No advice of any change in rates or conditions after opening the tender will be entertained.
7. In the event of any discrepancy in the rates quoted in words and figures, the former shall be prevail. Mathematical computation error, if any, in the amount shall however be rectified.

8. The Bank has assumed that Contractor is fully aware of all items of work. Some items of work will be done simultaneously and some items will be done in sequence and different operations in different times.
9. The Contractor is responsible for the due and proper execution of all the works, terms and conditions stipulated under this contract. Before offering his tender, Contractors should visit the site of works to ascertain the nature of work and to collect all relevant information such as general, local, physical & climatic conditions of the site, availability, handling and storage of materials, water, electricity, availability of labour, roads, the configuration of the ground. Any failure on the part of the Contractor in this regard shall not absolve him from any responsibilities or obligations under this contract and no claim whatsoever on account of these shall be entertained.
10. On receipt of intimation from the BANK for the acceptance of his/ their Tender, the successful Tenderer shall be bound to implement the Contract and within two days thereof, the successful Tenderer shall sign an agreement if called upon to do so, but the written acceptance by BANK of a Tender will constitute a binding contract between BANK and the person so tendering, whether such formal agreement is or is not subsequently executed.
11. The tenderer should note that unless otherwise stated, the Tender is strictly on item rate basis and his attention is drawn to the fact that rates for such a every item should be correct, workable and self –supporting. The quantities in the Schedule of Quantities approximately indicated the total extent of work, but may vary and even be omitted thus altering the aggregate value of the Contract. No claim for any compensation shall be entertained in this regard.
12. The tenderer must obtain all the information which may be necessary for the purpose of tendering for himself, on his own responsibility and at his own expenses and for entering into a Contract must inspect the Site of the work and all matters pertaining thereto, regarding supplying, fabricating and erecting at Site without any damage to the existing property of the Client’s or their neighbours, if any.
13. ORIENTAL BANK OF COMMERCE does not bind itself to accept the lowest or any tender and reserves to itself the right to accept or reject any or all the tenders either in whole or in part, without assigning any reasons for doing so. ORIENTAL BANK OF COMMERCE also reserves the right to divide the work between two or more tenderers and the successful tenderers shall have to carry out even part orders for various items at quoted rates. No variation in rates shall be allowed on this account under any circumstances, whatsoever no correspondence will be accepted / entertained in this connection and Bank decision shall be final conclusive and binding on all.
14. The rates shall be firm and shall not be subject to exchange variations, labour conditions, fluctuations in Railway Freights or any conditions whatsoever.
15. The rates quoted by the tenderer in the schedule of quantities will be deemed to be for the finished work and shall include all charges for:
  - i. Design, Fabrication, supply and installation at Site, Labour, maintenance, fixing, arranging, cleaning, making good, hauling etc.
  - ii. Plant, double, scaffolding, frame work, ladders, ropes, nails, spikes, tools, materials, workmen, protection from weather, temporary support, platform, and maintenance of the Same. Insurance for labour materials and third party.
  - iii. All Taxes or any other levy imposed by Central Government or State Government or any Local Authorities.
  - iv. Packing, transportation, loading and unloading, freight charges, transit
  - v. Covering for the walling and other works during inclement weather or strikes or whenever Directed, as necessary.
  - vi. All temporary canvas, lights, tarpaulin, barricade, water shoots etc.
  - vii. All measures required to be taken for protection of existing works.
  - viii. All such temporary weather-proof sheds at such places and in a manner approved by the Architect for the storage and protection of materials against the effects of sun and rain.
  - ix. Testing of materials.
  - x. No tools and plants shall be issued by the Bank under the Contract.
16. All the payments of bills for the work shall be done only at BHANDUP BRANCH, after sanction from MUMBAI CENTRAL CIRCLE OFFICE, ORIENTAL BANK OF COMMERCE.
17. For any clarification in any item of work, The contractor should get the same from the interior designer before carrying our the work and all items of work should be carried out with the approval of the Bank.

**EARNEST MONEY DEPOSIT/ SECURITY DEPOSIT/ MOBILIZATION ADVANCE**

1. The tenderer is required to deposit towards Earnest money, a sum of Rs. 4,500/- in the form of a Demand Draft drawn in favour of “ORIENTAL BANK OF COMMERCE” and submit the Demand Draft in separate Envelope before closure of the tender. Tenders unaccompanied by the requisite Earnest Money Deposit will be summarily rejected.

2. EMD of the selected contractor / Tenderer will be retained as part of the Security Deposit required for due and satisfactory fulfillment of the contract in terms of the conditions of contract but shall be forfeited, if the Contractor / tenderer fails to execute the agreement or start the work within 2 days of receipt of acceptance letter or if he withdraws his bid within the period of validity of the bid (90 days). EMD of the unsuccessful tenderers shall be returned.
3. The Contractor shall pay Security Deposit @ 10% for the Contracted amount towards the security deposit after adjusting the EMD amount of Rs. 4,500/- shall be recovered in full from the first “on account “ bill.
4. 50 % of the retention amount shall be refunded to the contractor on virtual completion subject to the following:
  - i. Issue of Virtual completion Certificate by the Architect/Premises Department.
  - ii. Contractor’s removal of his surplus materials, equipment, labour force, temporary sheds /stores etc. from the site. (excepting for a small presence required if any for rectification during defect liability period and approved by the Bank ).
5. The remaining 50% of the amount may be refunded 14 (fourteen) days after the end of defects liability period provided he has satisfactorily carried out all the works and rectified all defects in accordance with the condition of the contract, including site clearance.
6. Defects liability period: Defects pointed out during the defects liability period of 6 (Six) months from the date of virtual completion of work, will be satisfactorily rectified by the contractor at no extra cost to the Bank with end satisfaction.
7. No interest shall be payable on the EMD/SD amount.
8. No payment will be made towards mobilization Advance.
9. Tender fee Rs.500/- in the form of a Demand Draft drawn in favour of “ORIENTAL BANK OF COMMERCE” and submit the Demand Draft along with EMD fee before closure of the tender

#### **VALIDITY OF TENDER BID**

1. The tender rates shall remain valid for a period of 90 days from the date for receipt of tender.
2. The tendered Rates shall remain firm during the contract period and no price escalation shall be permitted,

#### **BANK’S RIGHT OF ACCEPTANCE OF BIDS.**

The BANK does not bind itself to accept the lowest or any tender and reserves to itself the right to accept or reject any or all the tenders either in whole or in part, without assigning any reasons for doing so. BANK also reserves the right to divide the work between two or more tenderers and the successful tenderers shall have to carry out even part orders for various items at quoted rates. No variation in rates shall be allowed on this account under any circumstances, whatsoever no correspondence will be accepted / entertained in this connection and BANK’s decision shall be final conclusive and binding on all.

#### **BID, QUANTITIES / MEASUREMENTS**

1. Price bid shall be quoted for all the items described in the schedule of quantities. Price quotation for part items of the schedule shall not be accepted and such tender shall be summarily rejected.
2. No payment shall be made for the personal visit for assessing the quantities/ measurements for the preparation of the tender bid.
3. Quantities / measurements for which the bid for various item is submitted shall be given precisely in the schedule of Quantities, These quantities and measurements shall be based on the basic of personal assessment and physical verification at site.
4. The Contractor shall calculate realistic quantities after receipt of drawings and after submitting first interim bill but before submitting the second interim bill to Bank.
5. Any work done at factory will not be counted in the running accounts bill until the material is brought on site.
6. Excess quantity shall not be executed without written permission from Bank. In case of upward or downward revision in quantities of items, the rate quoted by the Contractor shall remain firm at all the times.

7. The contractor shall take joint measurements with the Architect/Bank representative before covering up or otherwise placing beyond the reach of measurement any item of work should the contractor neglect to do so, the same shall be uncovered at contractor's expense or in default thereof, no payment or allowance shall be made for such work or the materials with which the same, was executed.
8. 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 Specifications subject to the approval of the Architect / Bank.

### **DIMENSIONS**

1. Figured dimension are to be followed in all cases, Large scale details take precedence over small scale drawings, In general the drawings shall indicate the dimensions positions and type of construction, the specification shall indicate the qualities and methods, and the bill of quantities shall indicate the quantum and rate for each item of work.
2. Any work indicated in the drawings and not mentioned in the specifications or vice-versa shall be furnished as though fully set forth in both. Any ambiguity, conflict of interpretation, errors or inconsistencies discovered in the drawings / documents shall be promptly brought to the provisions giving more rigorous interpretation shall prevail but in the event of disagreement between the contractors and the supervisors, decision of Architect shall be final. In case of any discrepancy, the contractor is to ask for an explanation before proceeding with the work. However specifications will prevail over the drawings.

### **OBSERVANCE / COMPLIANCE OF LABOR LAWS AND OTHER STATUTORY PROVISIONS FOR THE CONTRACT**

1. The contractor shall, in the execution of the contract, be responsible to comply with all the labor laws & statutory provision governing the work, such as, but not limited to, the following Laws or any other act or enactment relating thereto and rules as amended up to date.
  - a. Contract labor (Regulation & Abolition) Act. 1970. The Contractor shall submit a copy of the license obtained under this act along with the bid.
  - b. Employees State Insurance Act for Security and Insurance of staff/ workers.
  - c. Payment of Wages Act.
  - d. Minimum wages Act, 1948.
  - e. Workmen's Compensation Act.
  - f. Industrial Disputes Act.
  - g. Bank's Liability Act

The Contractor shall abide by and adhere to all labour laws, PF, ESIC, etc. The Contractor shall work only on and during hours of working day unless he obtains prior approval of the Architect / Bank. The Contractor will observe and abide by the rules and regulations of the public Authorities regarding overtime, night working and any particular rule regarding nuisance to the residence that may result there from.

2. The works to be carried out under the contract shall, except as otherwise provided in these conditions, include all labor, supervision, materials, tools, tackles, plants, equipment, transport, lead/ lift of materials etc. as may be required for execution and completion of the works.
3. The materials used for the work shall be of prescribed quality / standard and the work executed according to the prescribed specification. Materials and mix not being of the specified standard / specification shall be rejected at the cost of the contractor.
4. After completion of work all accumulate debris, dirt etc shall be removed and disposed away from the BANK premises by the contractor at his expense and no payment shall be done / made for that.
5. Doors, Windows, Staircases and passages shall be cleaned / washed by the contractor as part of the contract work without any additional payment.
6. The debris shall be removed from the site every three days.
7. The contractor shall clean the site everyday before the closure of work.
8. No additional work is to be carried out by the contractor unless instructed by the BANK through Architect. The contractor will have to carry out the item of work with prior permission from BANK and as per instruction from Architect which may not have been specified in tender but necessary for completion of job.
9. Any extra item of work carried out other than specified in tender will be paid by the BANK as per the actual expenses and 15% for overheads and profit certified by Architect.



## **INCOME TAX**

1. The bidder shall indicate his Income Tax PAN/GIR Number.
2. Income Tax @ \_\_\_\_\_ of the amount of each payment shall be deducted and deposited with the Government as per Current Statutory provision if applicable. On completion of the work, a certificate for the Income Tax deducted at source given to the contractor.

## **DOCUMENTS TO BE COMPLEMENTARY**

All sections of contract document and working drawings shall be complementary to each other. In case of ambiguities, discrepancies or contradictions between any two sections. Bank / Architect's decision shall be final and binding on the contractor for interpretation of same.

## **COMPLETION PERIOD**

Time is the essence of the contract and the contractor is required to complete the entire work to the satisfaction of the Bank in 30 days from the date of commencement of work.

## **PROGRAM WORK AND PROGRESS REPORTS**

The successful contractor will have to submit a detailed bar-Chart indicating the schedule of various activities from the date of commencement till completion and get the same approved by Architect. Contractor shall strictly adhere to the same. This program shall form part of contract and shall be binding on the contractor. However, the BANK reserves the right to alter the Program, if necessary, from time to time. No claim whatsoever of any nature by the Contractor on this account shall be entertained by BANK. They shall also have to write their requirements about co-ordination from other agencies working at site.

## **WATER & ELECTRICITY REQUIREMENT**

1. The Contractor will be permitted to draw and use water from BANK's U/W Tank and O/W Tank. He will not claim any compensation for late, intermittent and no supply of water. At the time of shortfall, the Contractor will arrange water without any extra cost. The Contractor has to arrange 'Sintex' tanks of adequate capacity to store water and pumps and pipes for distribution of water from tanks to work place free of charge. The site for storage and distribution of water will be decided by the owner / Bank.
2. The Contractor will be provided Electricity at one point by the BANK free of cost, only most convenient to the Bank. He will also ensure that all safety measures are adhered to at his costs. The Contractor will not make any wastage of this facility nor will claim any compensation for late or intermittent supply for electricity. Cost of power shall be born by the BANK. Any accidents, mishaps, etc. due to fault and negligence of Contractor's workmen, the Contractor will be responsible and indemnifies and keep indemnified the members of the managing and repair committee and the BANK.

## **DELAY IN COMPLETION OF WORK**

1. Liquidated damages per week will be 1% of the contract value inclusive of non-completion of work in time including Sundays and holidays per week, subject to maximum of 10% of contract value. The Bank may without prejudice to any other mode of recovery deduct the amount of such damages from any moneys in his hands due or which may become due to the Contractor. The payment or deduction of such damages shall not relieve the Contractor of his obligations and liabilities of this contract.
2. If in the opinion of the Bank / Architect, the works gets delayed due to causes which the Bank may consider being beyond the control of the contractor, the Bank at the completion of the time allowed for the contract shall make fair and reasonable extension of time for completion in respect there of. For extension of time for completion, the contractor has to apply in writing with detail reasons.

## **PAYMENT SCHEDULE**

1. Total value of work is Rs. \_\_\_\_\_ including transportation, loading, unloading, Octroi charges etc. and nothing extra will be paid on any account. In the event of variation in the Quantity / Area, the payment shall be made on the basis of the actual Quantity / Area at the quoted Rate.
2. Bill in Triplicate duly Certified by Architect shall be submitted to Bank after satisfactory completion of the work. Payments to the contractor shall be made within 15 days of submission of each "on account" bill. Bill submitted by the contractor must contain item wise quantity of work done in a manner that verification of work done can be done. The quantities for which the bills are submitted shall be subject to physical verification before payment.
3. In the event of variation in the Quantity / Area, the payment shall be made on the basis of the actual Quantity / Area at the quoted Rate.
4. No interest will be given for late payments.

5. All payments to the Contractor shall be made subject to deduction of taxes at source at the rate applicable.
6. Final payment, except Security Deposit (which is to be released only after the defect liability period including observing the performance of water proofing during the rainy season) shall be made within 30 days from the submission of the final bill after verification of the completion of the work. No further claim except the security Deposit after the submission of the FINAL BILL shall be accepted.
7. For final payment, the Contractor will submit details of all items, payments received for works and materials, any claim and net balance due which Architect/ Bank will check, make any adjustments if any, will receive 'No Claim' from the Contractor and pay and settle the same if any.
8. The Contractor will submit original certificate for payment of Works Contract Tax in respect of the Owner / Bank or else the same will be deducted from his bills.
9. The decision of the Architect and repair committee for payment or for any extra work to be made or any deduction to be made from the whole cost of the work or any other matter whatsoever relating to the contract shall be final and binding to all parties.
10. The Contractor shall be liable to pay Rs. 500/- per day as penalty in the event of default for any reason whatsoever in the removal of debris and / or materials and / or tools and / or plants and / or equipment within 7 days from the written instructions given to contractor to do so till such removal takes place. The Bank may without prejudice to any other mode of recovery deduct the amount of such damages from any moneys in his hands due or which may become due to the Contractor. The payment or deduction of such damages shall not relieve the Contractor of his obligations and liabilities of this contract.

#### **SUBLETTING**

The selected contractor shall not sub-contract the work to any other individual, Agency or firm.

#### **DEFECTS IN WORK**

1. Any defects / deficiency pointed out by the BANK's authorized person(s) shall be removed / rectified to his / their satisfaction, otherwise payment for such items(s) shall not be passed till the defect/ discrepancy is removed / rectified by the contractor.
2. The Architect shall have the power to withhold any certificate of work and/ or part thereof not being carried out to his satisfaction and he can make the necessary corrections in previous certificate in any subsequent certificates.
3. In case the Contractors are disobeying Architect/ Bank, they may get bad work replaced in the manner the Architect think fit at the cost and consequences of the Contractor.
4. The Architect/ Bank shall have the right to alter, omit and abandon any part of work without invalidating the contract. If any work is over and above that included into the Contract and is required to be executed at site, the Architect/ Bank has power either to delegate this work to Contractor as an extra item or to any outside Contractor, as the case may be.

#### **SECURITY OF WORKS / MATERIALS / STORES ETC OF THE CONTRACTOR AND BANK'S PROPERTY.**

1. The Contractor shall be responsible to make safety arrangements at his own cost for his materials / stores, storages, etc. All such stores shall be cleared away and the ground left in good and proper order on completion of this contract unless otherwise expressly mentioned therein.
2. The Bank will provide the contractor open space for storing the cement. The area has to be maintained by the Contractor during the period of work. He can construct a temporary shed and he alone will be responsible for his materials.
3. All stores and materials brought to the site shall become and remain the property of the Bank and shall not remove from the site without prior written approval of the Bank. When the work is finally completed or the contract is determined for reason other than default of the Contractor, he shall forthwith remove the same from site.
4. All tools, plant and equipment brought to site by the Contractor shall not be removed from the site without prior written approval of the Bank. When the work is finally completed or the Contract is determined for reason other than default of the Contractor, the Contractor with prior written permission of the Bank shall forthwith remove the same from site all tools, plant and equipment.
5. For any damage / injury to the BANK's property or to any member of the BANK or to the member's property on account of any unsafe practices adopted or by any un-prudential action by the Contractor or by his men, the

contractor shall be responsible. BANK reserves the right for recovering proper remedy / compensation for the same from the contractor.

6. Contractor should indemnify and keep indemnified the Bank against any legalities arising out of labour rules, local authorities rules etc. during the execution of work and any losses and claims for injuries or damage to any person or any property and should take third party insurance in the joint name of Bank and contractor.
7. The Contractor shall ensure protection to the owners, flat owners, occupiers of the Bank, other properties near site and to the public in general. The approach is kept free at any time.
8. The contractor must take all measures and precautions to prevent death / injury to his own labors or any other person and shall take THIRD PARTY (Public Liability) Insurance Policy in the joint name of BANK and contractor at his own expenses. This will be comprehensive and all risks covered to safeguard all men, materials and property during and on account of the execution of work under this contract and will submit certified copy to employee.
  - a. All Risk Policy with accidental cover to neighboring property due to work of contractor's workmen.
  - b. Workmen's Compensation Policy.
  - c. Automobile Third Party Insurance with unskilled third party liability of his vehicles or his suppliers or debris removal vehicles, etc. damaging any cars, etc. while bringing, removing materials, etc.
9. The contractor shall, if required by Architect / bank, arrange to test materials and / or portion of the work at his own cost in order to prove their soundness and efficiency. If after any such test, the material or portion of work is found, in the opinion of the Architect and Bank to be defective or is found, in the opinion of the Architect and Bank to be defective or unsound, the contractor shall pull down and re-erect the same at his own cost. Samples of materials and workmanship shall be submitted by the contractor for the approval of the Architect / bank before procurement and execution.
10. Contractor shall submit written performance guarantee from the manufactures of all bought out items.
11. The Contractor shall submit original copies of invoices, order forms for any materials purchased for project work, to the Bank / Architect if called for.

#### **CONTRACTOR'S SUPERVISION**

1. The Contractor shall give and provide all necessary superintendence during the execution of work and as long after as Architect / Bank may consider necessary for proper fulfilling of Contractor's obligations under the contract. The Contractor shall himself supervise the execution of contract and shall appoint a full time competent agent (site engineer / supervisor) approved by the Architect / Bank to act on his behalf and to be present all throughout at site. The Contractor shall further employ engineers and assistants to the above to supervise the work in sufficient numbers to the satisfaction of Architect / Bank. These engineers must be completely authorized by the Contractor to represent him and to receive and execute order and instructions by the Architect / Bank as if Contractor himself is present. The Contractor shall visit the site daily and shall have minimum once a week, or more as the case may be, joint meeting with the Architect & Bank on a day fixed jointly by the Architect and the Bank.
2. The Contractor shall provide and employ on site in connection with the execution and maintenance of the works:
  - a. Only such assistance's as are skilled and experienced in their respective fields and qualified and such agents, foreman and leading hands as are competent to give proper supervision to the work.
  - b. Such skilled, semi-skilled and unskilled labour as is necessary for the proper and timely execution and maintenance of the work.
  - c. The contractor shall employ a whole time qualified and competent supervisor for the work, whose name shall be notified and who shall interface with the BANK's representative(s) for the ongoing contract work.
3. The Architect / Bank shall be at liberty to object any Contractor man / men, employed by him, for misconduct or is incompetent or negligent in the proper performance of his duties or whose employment is otherwise considered by the Architect / Bank to be undesirable to work within the premises of BANK. Any person so removed from the works shall be replaced immediately by a competent substitute.

#### **INSURANCE:**

The contractor shall obtain adequate insurance cover at his own cost for work against any loss or damages as well as workman compensation and third party risk, until the date of virtual completion of the work, The insurance cover shall be in joint names of the owner and the contractor, is to be deposited with the owner within 21 (twenty one) days from the date of issue of work order.

#### **OCCUPATION OF PARTIALLY COMPLETED PORTION BY THE BANK**

The Bank shall be entitled to and will be at liberty to occupy even the partially completed portion of the work by themselves or through their agents and servants if they so desire. Necessary extension of time for completing the work

shall have no claim for any compensation whatsoever due to the delay, if any involved in completing the work on account of partial occupation.

### **MOCK UP**

The Contractor shall prepare a mock-up of items, if required, strictly in accordance with the specification, free of cost, for approval of Architect and Bank. The work on these items shall proceed further only after the approval of the mock-up.

### **UNSCHEDULED ITEMS OF WORK**

1. Work should be carried out strictly as per the standard specifications given in Tender document and the directions of the Engineer Workmanship / Work of substandard nature will not be accepted and paid for.
2. Any work carried out as per specifications and found defective in opinion of architect / consulting engineer shall be demolished and replaced by new work by contractor to the satisfaction of architect / consulting engineer.
3. If change in any item or additional work is to be carried out while executing the job by the contractor will be executed with prior consent from the Bank and as per instruction from Architect which may not have been specified in tender but necessary for completion of job.
4. In case of any dispute the decision of Bank will be final and binding on the contractor.
5. The Contractor shall comply with all acts and regulations for the successful completion of the contract works and shall give due notice and pay all fees / taxes etc. as per statutory requirements.
6. No additional work is to be carried out by the contractor unless instructed by the Bank through Architect.
7. All materials to be delivered at site. If the material used for the work is not in conformity with the specifications, the same shall be replaced at your cost. All the material required for the above work shall be arranged by the contractor at his own cost.
8. Selection of material to be done in consultation with the Bank's representative / Contractor. The Contractor shall, if required by Architect/Bank, arrange to test materials and / or portion of the work at his own cost in order to prove their soundness and efficiency. If after any such test, the material or portion of work found, in the opinion of the Architect and Bank to be defective or is found, in the opinion of the Architect and Bank to be defective or is found, in the opinion of the Architect and Bank to be defective or unsound, the Contractor shall pull down and re-erect the same at his own cost. Samples of materials and workmanship shall be submitted by the contractor for the Approval of the Architect / Bank before procurement and execution.
9. Rules for varied/deviated or extra items to be worked out on the rates quoted in the Tender for the similar items. Wherever it is not possible to base the rates for varied/ deviated or extra items on Tender quoted rates then the rate analysis is to be submitted by the contractor will include the actual cost of material, Taxes , Transportation if any, Miscellaneous expenses, Labour, Wastage of materials, 15% towards contractors overheads and profit.
10. Bank will provide free Electricity and Water for the execution of work. However the Contractor shall make his own arrangement to draw the power and water from source as decided by Bank.
11. While executing the work the contractors have to ensure that no inconvenience whatsoever is caused to the offices / people functioning in the premises.
12. On completion of the work the contractor shall clear away and remove from the site all constructional plant, surplus materials, rubbish and temporary works of every kind and leave whole of the site and the works clean and in a workman like condition to the satisfaction of client. No extra payment will be made for this purpose. After completion of work all accumulate debris, dirt etc shall be removed and disposed away from the Bank premises by the contractor at his expense. The Contractor shall take due care while disposing of such waste materials and ensure that any rules / regulations laid down by Municipal Corporation or any other statutory body are not violated. The Contractor shall be responsible and answerable to any complaint arising out of improper disposal of waste material.
13. Doors, Windows, Staircases and passages shall be cleaned / washed by the contractor as part of the contract work without any additional payment. The contractor shall clean the site everyday before the closure of work.
14. Adequate number of fire extinguishers, first aid boxes, must be provided on the site by the contractor.
15. Any item work which is not specified in the schedule and which is not capable of assessment by sight (visual) inspection and which becomes known only after the contract work has commenced, such as broken/ leaky pipes,

cracks in walls, seepage. Percolating through the walls, beams / pillars etc shall be, on joint inspection, by the BANK and Contractor, assessed for quantum and the rate decided on mutual consultation.

### **VARIATIONS**

1. The Architect/ Bank shall make any variations of the form, quality or quantity of the works or of any part thereof that may in their opinion be necessary and for that purpose or for any other reason it be necessary, the Contractor shall do any of the following :
  - a) Increase / decrease/ omit any work
  - b) Change, character, quality, level, lines, position, dimensions etc.
  - c) Execute additional work of any kind as may be necessary for completion of the work.
2. And no such variation shall in any way vitiate or invalidate the contract but the extension of proportionate time limit, if any, for all such variations shall be taken in to account.
3. The Contractor shall make no such variations without an order in writing by Architect / Bank.

### **CANCELLATION OF THE CONTRACT OR PART OR FULL ON CONTRACTOR'S DEFAULT:**

If the Contractor shall at any time:

- a) Become bankrupt or insolvent.
- b) Make an arrangement without assignment in favour of his creditors or agree to carry out the contract under the committee of Inspection of his creditors.
- c) Being an individual / partner / company or corporation go in to liquidation.
- d) Have action levied on his goods or property on the works.
- e) Assign the contract or any part thereof otherwise than as provided in the general condition of the Contract.
- f) Abandon the Contract.
- g) Persistently disagree the instructions of the Architect / Bank and or contravene any provisions of the contract including general accepted principles of working.
- h) Stopping the work under flimsy excuse with threatening attitude or showing discourtesy to members so the majority members wish this.

In that case, the Bank may determine and terminate the contract after giving due notice and time to the Contractor. The Bank shall be entitled after giving due notice in writing for removal of the Contractor from whole or any portion of work, without avoiding the Contract or releasing the Contractor from any of his obligation or liabilities under the Contract and adopt any or several of the following measures:

- I. Rescind the Contract, in which case the security deposit of the Contractor shall stand forfeited to the Bank without prejudice to Bank's right to recover any amount from Contractor,
- II. Carry out the work or any part thereof by employing other agency and required labour and materials and debiting on Contractor's account.
- III. Measure up the work executed by the Contractor and to get the remaining work completed by another contractor at the risks and expenses of the Contractor. In the event of any several of the courses referred above being adopted.
- IV. Upon non-completion of the work, upon use of sub standard quality, upon non co-operation, upon a deadlock on a particular issue between the Owner/ Bank and the Contractor / Architect.
  - a. The contractor shall have no claim for compensation for any loss sustained by him by any reason for material purchased by him, tools, machinery, labor to retain the same in further execution of the work for wear, tear and destruction caused by his negligence.
  - b. The Bank shall be entitled to take possession of any materials, tools, machinery, equipment which was on site, as if those are the property of Bank to carry out the balance work, In this case Contractor is not entitled for any compensation for use and employment of the same.

### **ARBITRATION CLAUSE**

All disputes or differences of any kind whatsoever which shall at any time arise between the parties hereto touching of concerning the work or the execution or maintenance thereof of this contract or the right touching of concerning the works or the execution or maintenance thereof of this contract or the construction, remaining operation or effect thereof or to the rights or liabilities of the parties or arising out of or in relation thereto whether during or after determination, foreclosure or 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 this purpose by the Bank, be referred for adjudication to a sole arbitrator to be appointed as hereinafter provided.

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

The contractor shall on receipt by him of the names as aforesaid, select any of the persons named to be appointed as a sole Arbitrator and communicate his name to the Appointing Authority within thirty days of receipt by him of the names. The Appointing Authority shall thereupon without any delay appoint the said person as a sole Arbitrator, if the

contractor fails to communicate such selection as provided above within the period specified, the Appointing Authority shall make the selection and appoint the selected person as the sole Arbitrator.

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

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

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

The Arbitrator shall be deemed to have entered on the reference on the date he 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 published the award.

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

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

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

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

I / We hereby declare that I/We have read and understood the above conditions for the guidance of Tenderers.

Seal :  
Place :

Signature of the Contractor  
Address :

## **SPECIAL CONDITIONS OF CONTRACTS**

1. All materials, tools, plants and equipment to be used for construction, shall be brought and stored on BANK premises by the Contractor in a manner directed in specifications for construction materials at his own cost and risk including his own security arrangement without causing hindrance to occupants.
2. All due precautions shall be taken by the Contractor to prevent damage including that of window panes, as a result of Contractor's action will have to be made good by the Contractor at his own expense.
3. a) All debris resulting from breaking work shall be carefully lowered on specially constructed platforms preferably in specially provided chutes and suitable screens and hoppers shall be provided to ensure that as far as possible no debris flies or rebounds from the building and / or scaffolding. Under no circumstances shall debris be thrown down on the ground or footpath.
4. The Contractor shall regularly remove all waste and debris from the site when one full truckload is accumulated on a regular basis. Dumping of debris temporarily on the premises shall be strictly in location allotted for the purpose and nowhere else. Every day after working hour's sweepers must clean the site.
5. The Contractor will provide at his own expense necessary sheds, passages, special covering, platforms to be constructed in front of main building, BANK office, staff toilet, and also netting, kantans, etc. in area of common passage at the work site.
6. Proper cordoning off shall be maintained at all times to ensure that no children or unauthorized persons enter the work area.
7. The Contractor shall bear in mind that he may have to carry out certain part of work inside the premises of the occupants and he will take extreme care not to damage inside BHANDUP BRANCH.
8. The contractor shall provide at his own cost necessary sanitary and drinking water facilities for his workers more about in area of site only and they commit no nuisance.
9. When a contractor is selected, if Architect/ Bank find any anomaly in rates of some specific items, the Contractor shall furnish explanation and rate analysis.
10. Rates quoted by the Contractor shall include all terminal taxes, octroi duties, central or state excise duties, import duties, sales tax and any other taxes leviable under the state or central government or public rules. No claim whatsoever shall be entertained in respect of escalation in prices of materials, labour etc. except change in taxes announced by Municipal or Government bodies subsequently. Rates quoted also include work Contract Tax. M.W. Tax, extra water charges, all liaison work with Municipal Authorities for Building Department, Water Department, Pest Control etc. including specific bills of water charges and sewage charges raised by BMC towards the repair works under taken including all out of pocket expenses. The Contractor at his costs and expenses shall obtain all permission from BMC, etc.
11. The contract shall not be deemed to be duly completed until maintenance certificate have been issued by the Architect recording that the works have been completed and maintained to his satisfaction and will be issued after defect liability period is over and after ascertaining the views of the repair committee.
12. The Contractor is responsible for the execution of all works, which is more particularly set out as per terms and conditions of the Agreement. The Contractor is well aware about the dangers and hazards for the completion of the said work. It is the Contractor who would be responsible in the event of breakage of glass of windows, etc. of the BANK and Contractor will take all precaution of BANK's property so as not to damage them.
13. The Contractor shall, at his own expense supply all the stores and materials required for the contract. All the materials to be supplied by the Contractor shall be of the best of kinds, and only of ISI standard. The Contractor shall furnish necessary proof to the satisfaction of the Architect / Bank that the materials comply with specifications as described in the Technical specifications. The Contractor shall, at his own expense and without delay, supply samples of materials proposed to be used in the execution of the work for the approval of the Architect / Bank, who may reject all materials not corresponding either in quality or in character with the approved samples. The Contractor is made aware that there will be no basic rate for all construction materials.
14. The Contractor shall not enter on or take possession of the site unless permitted to do so by the Bank. The portion of the site to be occupied by the Contractor will be clearly defined and indicated by the Bank and the Contractor will on no account be allowed to extend his operation beyond these areas. Then on completion, completely clean the areas of works against his final completion of work done in that area.

15. The Contractor shall suspend the execution of the work of any part/s thereof, wherever called upon in writing by the Bank / Architect to do so and shall not resume work thereon until so directed in writing by the authority. The Contractor shall also suspend the execution of work or any part thereof under notice of court, Government or Municipal Corporation unless the Architect / Bank instructs otherwise in writing. The Contractor will be allowed an extension of time for completion equal to period of suspension and no claim otherwise will be considered for payment. Time may also be extended to allow for alterations of work or deviation from the contract if it is felt reasonable by Architect / Bank.
16. If Bank has permitted the contractor to house his workers on site in specified areas, during progress of work he will erect temporary structures of the approved standards and scales for his workers and maintain at his own expenses. The Contractor should demolish / remove temporary structures before the main work comes to an end and clear the site. This facility is not incorporated in contract and will be exclusively at the discretion of the Bank and the Bank can stop this facility in the middle of work and Contractor cannot claim anything whatsoever for taking away this facility any time. If this facility is granted, he shall be responsible for giving all necessary notices of infection and contagious disease of his workers and instantly remove such cases from site. The Contractor shall obtain all necessary permission from municipality, government, etc. at his own costs.
17. It is hereby clarified that within the guarantee period of the entire work the owner / Bank observes any hitches or lacunas or damage caused to the flat and / or common area and / or the BANK's property, the Architect / Contractor shall be communicated regarding the same. The Architect / Bank would visit the premises and give their comments in respect of the same. The rectification of the damaged area is the sole prerogative and responsibility of the Contractor who is to rectify the said damage at his costs, etc. within the decided time frame as mutually decided between the parties. In the event of failure of the Contractor to rectify such error the Bank / Owner shall have the full liberty to deduct the amount of loss at cost from the balance amount due end payable to the Contractor.
18. The Contractor shall clean and level up the premises and open spaces in and around building to the satisfaction of the Bank at regular intervals and after completion of work. If he fails to their satisfaction, the same shall be carried out by the owner at Contractor's risk, cost and consequences and work will be treated as incomplete.
19. It is hereby clarified that the Employees / Workers who would be assigned the work and who would be temporarily lodged in the premises of the owner shall have no access whatsoever in the building after the completion of the work for the particular days. The workers shall not enter the building for the purpose of taking water or for any other private jobs that would be given by the flat owners during the subsistence of the work assigned.



## TECHNICAL SPECIFICATION

### **POWER PANELS:**

The Power panels shall be fabricated from MS sheet steel 16 gauge and shall be of compartmental design. The main supporting framework shall be of angle iron or of heavier gauge sheet metal. The panel shall be self-supporting design, dust and vermin proof, dead front and fully inter locked with isolating switches. The panel-mounted switches shall have Interlock defeat for testing and inspection.

The panel shall be designed so as to facilitate inspection, cleaning and repairs. The clearance between phase to phase and phase to earth or metal parts shall be as per relevant IS standards. The metering instruments like volt meter, ammeter etc. shall be flush mounted and shall be of 1.0 class accuracy and of standard design size shall be 96 mm x 96. All indication lamps shall be of neon type.

The panel shall have separate cable ally and a bus bar chamber. The bus bars shall be rigid hard drawn tinned electrolytic copper & sleeved with heat shrinkable sleeves. The current density shall not exceed 1.25 amp per sq. mm. and the neutral bus shall be rated for capacity of phase bus unless otherwise stated in schedule of quantities/drawings. However, the minimum size of bars shall be 25mm x 3mm.

The panel shall be powder coated comprising of degreasing and de-scaling in sulphuric acid etc. with synthetic enamel paint for smooth finish. The color of paint shall be battle-ship Grey or as directed. The Panel shall be tested at site before commissioning. The Panel drawings shall be got first approved from Architects before taking up for fabrication.

All wiring inside the panel shall be done with switchboard copper conductors/cables solid copper links. The insulators for supporting the Bus-Bars shall be epoxy based cast resin. All hinged doors shall be earthed with flexible braided copper earth. An earth bus of copper shall be fixed along the length of the panel at the lower section. Adequate ventilation for the panel shall be provided. Logic diagram of operation of switches shall be painted on the panel. The name plates for each feeders shall be of engraved design and pasted to the respective switch gear. The letters shall not be less than 10mm size for individual feeders and not less than 18mm for the main feeders. All switchgear to be mounted in the panel shall be as per schedule of quantities.

### **SWITCH FUSE UNITS:**

Switch Fuse Units shall be of sheet metal or iron clad with HRC fuses as described in schedule of quantities. The unit shall be of robust construction of standard specified make. design to withstand adverse working conditions. It shall have quick break type mechanism with ON and OFF position indicators of the operating handle. The switch shall be interlocked so that the unit cannot be opened in ON condition. The interior shall be so arranged that clearance from live parts are adequate and shrouded. Manufacture's instructions shall be followed for installation of switch fuse units. The switch shall be solidly earthed. The switch shall be mounted on walls on angle iron support grouted to wall. The supports shall be treated for rust treatment & painted with 2 coats of synthetic enamel paint. The height of the switch board shall be such that it is accessible for operation & maintenance.

### **CABLES:**

Cables shall conform to IS 1554-1976. Cable shall be heavy duty, armoured, PVC insulated & PVC sheathed 1.1 MV grade aluminum or copper. Cable shall be fixed with G.I. spacers & saddles at an interval of 45 cms and on every side of bends. The bending radii of cables shall be as per manufacturers instructions and in no case it shall be less than 12 times the overall diameter of the cable. Cable shall be so installed that they are not subject to mechanical damage. If there is a bend in the cable enclosed in a conduit, care has to be taken to prevent undue compression of insulation. This applies also to the top of vertical runs of longer than 5 meters where there could be compression caused by the weight of unsupported vertical cables. Cables may rest without fixing in horizontal runs or ducts or trunkings. The cables run in cable trays shall be permitted unless the cables exceed the standard drum length. Joints if so necessary shall be located in accessible position. Termination of the cables shall be done with heavy duty copper/Aluminum lugs and brass cable glands.

Cables laid under ground shall be to a minimum depth of 600 mm. It shall be ensured that cables laid underground are free of water lines, sewage lines etc. The trenches shall be at least 30 cm wide & filled with 10 cms thick of layer of dry sand on which the cable shall be laid. Further, 10 cms thick sand layer shall be put on the cable over which a brick layer shall be kept. The trench shall then be back filled with soft earth, rammed and consolidated to original level. Cable route indicators shall be laid at intervals of 20 metres and at all change in directions. For cables laid on walls aluminum tags shall be fixed showing the size of the cable and the feeder number of the cable. These tags shall be at each ends and at least one or two places at intermediate positions. The mode of measurement of the cables shall be as follows :

- i. For top entry of the cable, the measurement shall be taken up to the bottom of the switch-gear.
- ii. For bottom entry of the cable, the measurement shall be taken up to the top of that switch board. No wastage shall be allowed for measurements.

## **DISTRIBUTION BOARDS:**

1. These shall be of sheet metal and of standard design with copper bus bars. The board shall be fixed at accessible heights. The boards shall be solidly fixed to walls/partitions, concealed or open as directed. All connections inside the distribution board shall be neatly arranged and tied with PVC strings. The MCB's shall be of 9 KA for fault level. The distribution board shall be suitably earthed. Legend shall be written on D.B. & Circuits.
2. The Distribution Board circuitry shall be as per the schematic/given in Drawing.
3. The Sheet steel used for fabrication shall be of CRCA of 14/16 SWG. The Board shall be suitable for wall mounting. It shall be totally enclosed, Dust Proof & vermin proof. The fabrication shall be as per relevant is Specifications for degree of protection by enclosure for low voltage switch-gear IP 52. The Equipment such as MCB, ELCB, Insulators, Bus-Bars shall be as per relevant is specification with latest amendments.
4. The Sheet steel shall be smoothly finished, leveled and free from flaws. All doors, removable covers shall be Gasketed all round the perimeter.
5. The Service Voltage is 440 volts & Busbar will be Electrolytic copper. The copper busbar shall be tinned through out the length.
6. The door interlock shall be provided so that it shall not be possible to open the door with breaker in close position.
7. Enough space shall be provided for termination. The minimum two earth terminals shall be provided for each D. B. The Board shall be factory wired with proper ferruling.
8. Adequate shrouds shall be provided for avoiding accidental contact with Live Terminals, Busbar etc.
9. The Conduit knockout shall be provided for Conduit Entry.
10. The guaranteed technical particulars shall be provided for the MCB & ELCB etc.
11. The engraved black anodised labels shall be provided on all feeders.
12. All Steel works shall undergo a process of degreasing, pickling in acid bath, phosphating.
13. This shall be followed by two coats of primer and two coats of final finish paint, both applied with spray. The colour shall be light battleship gray.
14. The distribution board shall have hinged door.
15. The busbar supports shall be non hygroscopic, anti tracking material.

## **POINT WIRING**

### **(a) METAL CONDUITS:**

1. All conduit pipes shall conform to IS 9537 PART-II 1981. Metal conduits shall be ERW black enameled 20mm/25mm as the case may be depending upon the number of wires permitted. The conduits shall be fixed to walls/ceiling with M.S. saddles and spacers at an interval of 1 meter and on either side of bends.
2. All conduit accessories shall be 15 gauge & bends shall be of inspection type. All bends, couplers, threaded portions etc. shall be painted with anti-corrosive paint. Bends in the pipes shall be done with bending hickies.
3. All pipes shall be cleaned for sharp burrs. Switch boxes shall be of G.I. 16 G/14G. The switch boxes shall be concealed as per site requirement & as per Architect's/Architect's Instructions. Point shall be controlled with 5A switch or directly from DB as specified in schedule of quantities. Where plate type switches are not specified the switch-board shall have 3mm thick hylum sheet on which switches shall be mounted.
4. While laying the conduits in the slab before casting the slab, all drops shall be laid accurately to fall in position of the switchboard. Junction boxes shall be sand filled. All joints shall be airtight. Conduits shall be fastened to the reinforcement properly so that the conduits do not get dislocated while casting the slab. All conduits shall have 18 swg fish wire.
5. The conduit shall be of 16 gauge upto 32mm dia and 14 gauge above 32mm dia. reputed and approved make conforming is specification. Conduit shall be Heavy gauge rigid PVC with All accessories/fittings including ordinary & inspection tees; bushings, reducers, junction boxes, terminal boxes, saddles and steel supporting materials shall be of the same as of the conduit. The contractor shall have dies for threading of conduit.
6. The conduit shall run along walls, ceiling, flooring in accordance with layout drawings.
7. The conduit shall be field bend as far as possible with reasonable long radius. The conduit bends shall be free from cracks, other damage to the pipe or its coating and shall not have pipe section unduly flatten..
8. The conduit joint shall provide the structural rigidity and low electrical resistance.
9. All open conduit ends shall have bushings and all threads shall be cleaned and well painted with coating or red lead & oil. All burrs shall be smoothed and cleaned.
10. The conduit shall be supported with saddles at regular interval of 1000mm. The saddles shall be fixed with Rawal plugs and M. S. screws of 3mm size.
11. The No. of wires through a given diameter of conduit shall be as per is specification.
12. When two length of conduit are joined together through a coupling, running threads equal to the full length of the coupling shall be provided on any one length. Conduit length exceeding 8 meter length shall be provided with junction boxes.
13. Conduit & accessories shall be securely fixed before any operation like concrete pouring plastering etc. The conduit shall be fixed by clips which shall not cause deformation of conduits. The conduit fixing shall be at regular intervals not exceeding 1.5 meter. At the bends the fixing shall be secured by fixing clips at 150mm. All the supporting holes are to be drilled by electric drill machine.

**(b) PVC CONDUITS:**

The PVC Conduits shall confirm to latest IS standards and shall be of medium gauge. The conduits shall be joined with PVC adhesive at joints. The Conduits shall be fixed to walls/ceilings with GI, Spaces and Saddles at an interval of 60 cms & on either side of bends. The number of wires drawn in the conduits shall be as per table 1. The point wiring shall be controlled as in (a) above. The wiring shall be done with 2nos. of 1.5 sq.mm (Phase & Neutral) & 2.5 sq. mm. (earth) PVC insulated, copper conductors, multi stranded and color coded with green as earth and black neutral. The circuit wiring shall be with 3 nos. of 2.5 sq. mm. PVC insulated, copper conductors, multi stranded from distribution board to switch board and the rate shall be included in the point wiring unless otherwise stated in schedule of quantities. All other details shall be as for metal conduits.

**(c) CASING CAPPING/TRUNK AND TRUNKLING :**

PVC casing shall be fixed, wooden partitions by means of screws spaced not more than 60 cms apart. Holes for fixing the PVC capping shall be done by drilling machine only and these holes shall be plugged with PVC plugs or grips to which the screws shall be fastened. No less than 1 inch PVC casing shall be used. All bends, tees, joints etc. shall be done in workman like manner with standard accessories. The number of wires in PVC casing capping shall be limited to a fill factor of not more than 60%. The point shall be controlled by 5 amp switch. The switch boards shall either be flush mounted with partitions or surface mounted or concealed mounted as per site requirements and as directed. The wiring shall be carried out as described in (a) and (b) above.

This wiring shall not be done for concealed wiring & wiring over the false ceiling work.

**CIRCUIT WIRING**

1. The Circuit wiring shall comprise of laying PVC conduit from lighting distribution board to the first switch board & pulling of wires within the conduits with 2.5 Sq.mm copper wire, PVC insulated, 100v grade wire.
2. The scope includes all materials & labour with Installation. It also includes making proper connection in the Distribution board & switch board.
3. In case of group control directly from Distribution Board, the primary point shall be from D.B. to the first point and secondary point and from first point to the next point looped. The point shall terminate into the 3 plate-ceiling rose.

**SWITCH BOARD**

The lighting switch board boxes shall be MS/ zinc passivated with 16 gauge made suitably for controlling group of light/fixture or light control as indicated in the drawing. The switch board boxes shall be suitably in the office area as concealed type. All the switch boxes shall be provide with removable cover with proper provision of Plate/Piano type switches.

**WIRING METHODS**

1. The wire pulling in conduits shall be in accordance with standard practises. All the wires in a particular section by conduit shall be bunched together and pulled at a time.
2. The wires used shall be colour coded with Red wires for R phase, Yellow wire for Y phase, Blue wire for B phase Black wire for neutral and Green wire for each continuity conductor.
3. All the wires shall be purchased directly form the manufacturers and approved by the Architect.
4. All the wire shall be insulated with adequate thickness of extruded PVC.
5. All wires shall be of 1100v grade conforming to is 694 with latest amendment.
6. All the wire ends shall be ferruled with colour codes & numbers.
7. All the circuits shall be identified at both ends of the circuit.
8. A maximum of 3 lights to be switched on one switch of 5A.
9. The wiring shall be carried out with multi stranded PVC insulated copper wires of 1.5 sq. mm. 2Nos (Phase & Neutral) & 2.5 sq.mm. (Earth). In all cases the earth shall be of green color and neutral shall be black color. All wires used shall be of 660 V grade. The point wiring shall be inclusive of circuit wiring from Distribution Board to the switch-board unless otherwise stated in schedule of quantities. The circuit wiring shall be with 3 nos. of 2.5 sq.mm PVC insulated multi stranded copper conductors color coded as detailed above. The rate shall also be inclusive of any chasing as directed by the Architects/Architect/Client's Engineer to conceal the drops and finishing the same.

**5A/15 AMPS. SWITCH SOCKET OUTLET WIRING**

1. The Point wiring for 15 A Switch socket outlet includes running of 3 x 4.0 sq.mm PVC insulated stranded copper wire through conduit from the distribution panel board to the individual S/S/O
2. Two nos of 15 A S/S/O are to be looped in and controlled by MCB of 20 Amps in the distribution board at each floor. The circuit length shall not exceed a length of 70 meters.
3. All the wires for the S/S/O shall be pulled through separate conduit system (not to be mixed with light 5 Amps S/S/O etc.)

**5 AMPS SWITCH SOCKET OUTLET**

1. The point wiring for 5 Amps switch socket outlet includes running of 3 x 2.5 sq.mm copper conductor, PVC insulated, 1100v grade wires in PVC conduit from the light distribution board to the Individual socket.

2. A maximum of 6/8 Nos. socket are to be looped in & controlled by MCB in the lighting distribution board. The circuit length shall not exceed 60 meters.

#### **15/5 A SWITCH SOCKET OUTLET**

1. It shall be of approved make conforming to latest standards. The three-pin socket shall be provided with safety shutter to prevent accidental contact with live parts.
2. The box for socket outlet shall be suitable for concealed/surface mounting and should be supplied by the Manufacturer with the switch & socket unit.

#### **20 AMPS POINT WIRING**

1. The 20 A SP MCB with Reyrolle socket is to be provided including running of 3 x 4.0 sq.mm PVC insulated stranded copper wire through PVC conduit from distribution board to the individual switch.
2. One switch is to be provided in one circuit and controlled by one MCB of 20 Amp in the distribution board at each floor.
3. All the wires for the switches shall be pulled through separate conduit system ( not to be mixed light, 5 A S/S/O etc.)

#### **TELEPHONE POINTS**

1. Telephone Points shall include supply & installation of 25mm diameter PVC conduit & Accessories along with 2 pair/4 Core wire from Tag Block to Individual Point along with the Conduit. The Telephone wire shall be of oelton make or of approved sample.
2. The Conduit shall be laid concealed in slab/wall/beam column etc., from the Telephone Box to the Individual Telephone socket outlet Point as market in the Drawing.
3. In case of provision for further point for Telephone G.I. Pull wires shall be laid inside the entire length of conduit.
4. The Telephone Tag Block of M.S. shall also be provided by the Contractor including latest Type of Terminal strip cover extra as per MTNL approved list.

#### **EARH PITS / STATION**

The earthing station shall be done as per IS 3043 (1981) and as per drawing no. E1. The earth pit shall be atleast 2.5 mtrs deep with GI plate electrode shall be hot dipped of 600mm x 600mm x 6mm thick. The size for copper electrode shall be 600 x 600 x 3mm thk. An alternate layer of salt and charcoal shall be filled up to 200 mm above the top of the electrode. The electrode shall be connected with 25mm x 6 mm thick GI Flat which shall be terminated with nuts and bolts into brick masonry chamber on top. The brick masonry chamber shall be of size 300mm x 300mm x 300mm deep which will carry the finneling arrangement for watering. A GI Flat of 25mm x 3 mm from brick masonry chamber to the switch gear inside the switch room shall be laid under ground and / or fixed to walls and the rate for this shall be paid as a separate item.

#### **INSTALLATION OF ELECTRIC FITTINGS**

All electrical fittings shall be fixed with down rods or on round blocks as stated in schedule of quantities. The down rods shall be 20 mm dia and 1.6 mm wall thickness of ERW black enameled MS. The down rods shall be fixed with ball and

socket joints check nuts etc. Special fixtures like spot lights etc. shall be fixed to the false ceilings as per manufacturer's recommendations. The fittings shall be connected with 3 core 0.5 sq. mm. flexible copper cord / cable from ceiling rose and suitable earthed.

#### **TESTING OF ELECTRICAL INSULATION**

The following tests shall be carried out after completion of the electrical insulation work.

- 1) Insulation Resistance Test.
- 2) Polarity Test of Switches.
- 3) Earth Continuity Test.

**1) Insulation Resistance Test :** The insulation resistance shall be measured by applying between earth and whole system of conductors or any section thereof with all fuses in place and all switches closed ( except in earthed concentric wiring ) all lamps in position and both poles electrically connected together., or direct current pressure of not less than twice the working pressure, provided that it need not exceed 500 volts for medium voltage circuits, be applied. Where the supply is derived from 3 wire DC or Poly phase A.C. System, the neutral pole of which is connected to the earth either direct or through added resistance, the working pressure shall be deemed to be that which is maintained between the phase conductor and the neutral. The insulation resistance measured in mega ohms between all conductors connected to one pole of phase conductor of the supply and all the other conductor and switches in off position it's value shall be not less than as specified below :

The insulation resistance measured in mega ohms shall not be less than 50 mega ohms divided by the number of outlets or when PVC insulated cables are used for wiring , 12.5 mega ohms divided by the outlet subject to a minimum value of 1 mega ohm.

A preliminary and similar test may be made before lamps etc. are installed and in this event the insulation resistance to earth shall not be less than 100 mega ohms divided by the number of outlets or when PVC insulated cables are used 25 mega ohms divided by the number of outlets subject to a minimum of 1 mega ohm.

**2) Polarity Test of Switches :** In a 2 wire system a test shall be made to verify that all switches in every circuit are fitted in the same conductor through out and such conductors shall be labelled or marked for connection to the phase conductor or to the non earthed conductor of supply.

In a 3 wire or 4 wire insulation a test shall be made to verify that every non linked single pole switch is fitted in a conductor which is labelled or marked to one of the phase conductor of supply.

**3) Earth Continuity Test :** The Earth Continuity Conductor including metal conduits and metallic envelopes of cables in all cases shall be tested for electric continuity and electrical resistance of the same along with the earthing lead but excluding any added resistance or earth leakage circuit breaker measured from connection with earth electrode to any point in the earth continuity conductor in the completed insulated shall not exceed 1 ohm.

#### **POWER FACTOR CORRECTION PANEL**

The power factor correction panel shall be fabricated from sheet steel & powder coated. The panel shall be compartmentalized with tinned copper bus bars TPN as described for power panels.

The power capacitors shall be APP type, low loss, 3 phase, delta connected and self discharged type. The power factor control shall be done by automatic power factor control relay for controlling the power factor within the set limits by auto switching of required capacitor Banks. The required Capacity / P.F Banks shall be as per schedule of quantities. The P.F shall be automatically corrected to near Unity.

The C.T. ratio given in the schedule / diagram is indicative. The same shall be matched for correct operation depending upon the operating load. The relay shall be totally microprocessor based for setting the desired target power factor band. The APFC relay shall have indications like power ON, low current etc & shall be of required stages as per schedule of quantities. The P.F Panel shall have Auto Manual switching facility.

#### **The general specification shall be as follows :**

- i. System supply voltage 415 volts.
- ii. C.T. secondary rating 5 A, 5 VA Burden.
- iii. Output switching capacity 5A at 230 V AC & 2A at 440 V AC, Operating temperature, 10 degree Centigrade to 50 degree Centigrade. Accuracy better than 1%. Low current release 10% of full rated C.T.
- iv. Switching time between stages 4 to 6 seconds.
- v. Range of indications of PF 0.5 lag to 0.5 lead digital.
- vi. Display LED indications.
- vii. Range of target P.F. setting 0.7 to 0.99.
- viii. Switch for auto / manual operation.
- ix. Indications for selection of stages.
- x. Selection of dead band.

## PREFERRED MAKES OF MATERIALS

1. All materials to be supplied by the contractor shall confirm to the relevant Indian Standard and bear “ISI” marking distinctly. However for the guidance of the Contractor some of the preferred makes of materials are as follows.
2. All materials shall be of the first quality.
3. Wherever Contractor proposes to use ‘ equivalent ‘ makes ( ie other than specified ) the same shall be done only after prior approval from Bank. Bank may consult Interior Designer before giving approval. Any additional expenditure, time due to this will be on Contractor’s account and no claims will be entertained.
4. Read “ or equivalent approved “ at the end of the list of approved manufacture / sub-contractor / brand for every materials.

### SR NO. MATERIAL

### APPROVED MANUFACTURES/SUPPLIERS

1. SFU/ Isolator switch	EE/L&T/Siemens
2. L.T. Panels	EE/L&T/ Siemens / As approved
3. Meters	AE/MECO/ Rishab/ Silkon/ UE
4. DB (HRC Fuse )	EE/Standard/ CPL/ Havel
5. DB (MCB)	EE/MDS/ Siemens
6. Wires	Finolex / Polycab
7. Conduits (MS/GI)	Superme BEC/ Precision / Circle Ark
8. Switches /Sockets pace	Anchor/ Preeision/ CPL/ MK/Northwest/ Avanti/ LK
9. Lugs	Dowell/Jainson
10. Telephone cables	Finloex/ Delton/ MTNL approved
11. Decorative lights (spot lights/ picture lights wall)	Phillip / Wipro
12. Fire detectors	Appolo Honry well
13. Security system	Shellain / Radioncis sentrol
14. ELCB/RCCB	EE/MDS/ Datar
15. Telephone Tag-block	Krone
16. NCCBS	L&T/EE/Crompton
17. Air Circuit Breaker	L&T Siemens /EE
18. Changeover Switches	Siemens / Blcon/ Kayee
19. Contractors	Siemens /L&T
20. Muisic speakers	Phillips/ Ahuja
21. Amplifiers	Phillips /Ahuja
22. Elec. Fittings & fixtures	Phillips /Crompton/Wipro
23. PL/ Spot Lights fittings	Phillips /K-lite/Wipro
24. Copper Cable (Conductor)	Polycab / CCI ISI Mark
25. Flourscent Lights, PL Lights and Lamps etc.	Phillips/Crompton/Bajaj
26. MCB/ ELCB	MDS/ DATAR
27. Main switcher (sheet metal boxing)	L&T
28. Ceiling Fan	Crompton/ Usha, Bajaj, Orient
29. Wall fan	Usha /Almonard
30. Exhaust fan	Unique/Crompton/GEC
31. Gland Flange Type	BRACO
32. Casing Caping Patti	PRESTO PLAST

## PREAMBLE TO BOQ

### ABBREVIATIONS:

R.MT.	:	Running Meter
Sq. MT.	:	Square Meter
Sq. Ft.	:	Square Foot
T.W.	:	Teak Wood
Q.R.O	:	Quote Rate Only
C / C	:	Centre to Centre
C.P.	:	Chrome Plated
NO.	:	Numbers.
MM.	:	Millimeter

1. All dimensions are in M.K.S. unless otherwise stated.
2. The quoted rate shall be all inclusive and cover the cost of material including wastage, Freight, all types of taxes, duties, royalties, erection, construction, testing of materials, if required samples brought for approval, tools and tackles, plant and equipment's, supervision, overheads, profit and any other expenditure incurred for completion of work as per drawings, specifications and to the full satisfaction of Bank / Architect.
3. The rates quoted shall be valid for working at all heights, depths, and on all floor levels, No extra payment shall be made for scaffolding, staging, ladders, handling, transportation of men and materials at higher or lower levels and stacking of materials, removing debris etc. from the site. etc.
4. The item rate specifications are indicative. The Contractor will have to carry out the work In accordance with the drawings, technical specifications and / or other conditions laid down in tender document and to the full satisfaction of Bank / Architect.
5. Quantities mentioned against respective items are approximate and can vary to any extent. Payment shall be made on actually executed quantities.
6. No claims shall be entertained in case of increase or decrease in quantities, Bank / Architect reserves the right to increase / decrease quantities of any item and also to add / Delete any item in totality. Bank / Architect reserve right of operating any item for any work.
7. Rates for ELECTRICAL WORK shall include cleaning glass panels, floor etc.
8. After completion of work the site shall be handed over absolutely clean, after ensuring that all floor, walls, etc. are spotless clean.
9. Unless otherwise noted, the method of measurement will be as per I.S. 1200.
10. Bank / Architect reserve the right of operating all 'Quote Rate only' items.
11. Wherever contractor proposes to use 'equivalent' makes (i.e. other than specified) he shall obtain Bank's prior approval. Bank may ask Architect before giving approval to the same. Any additional cost and time lost due to this will be on Contractor's account and no claims will be entertained.

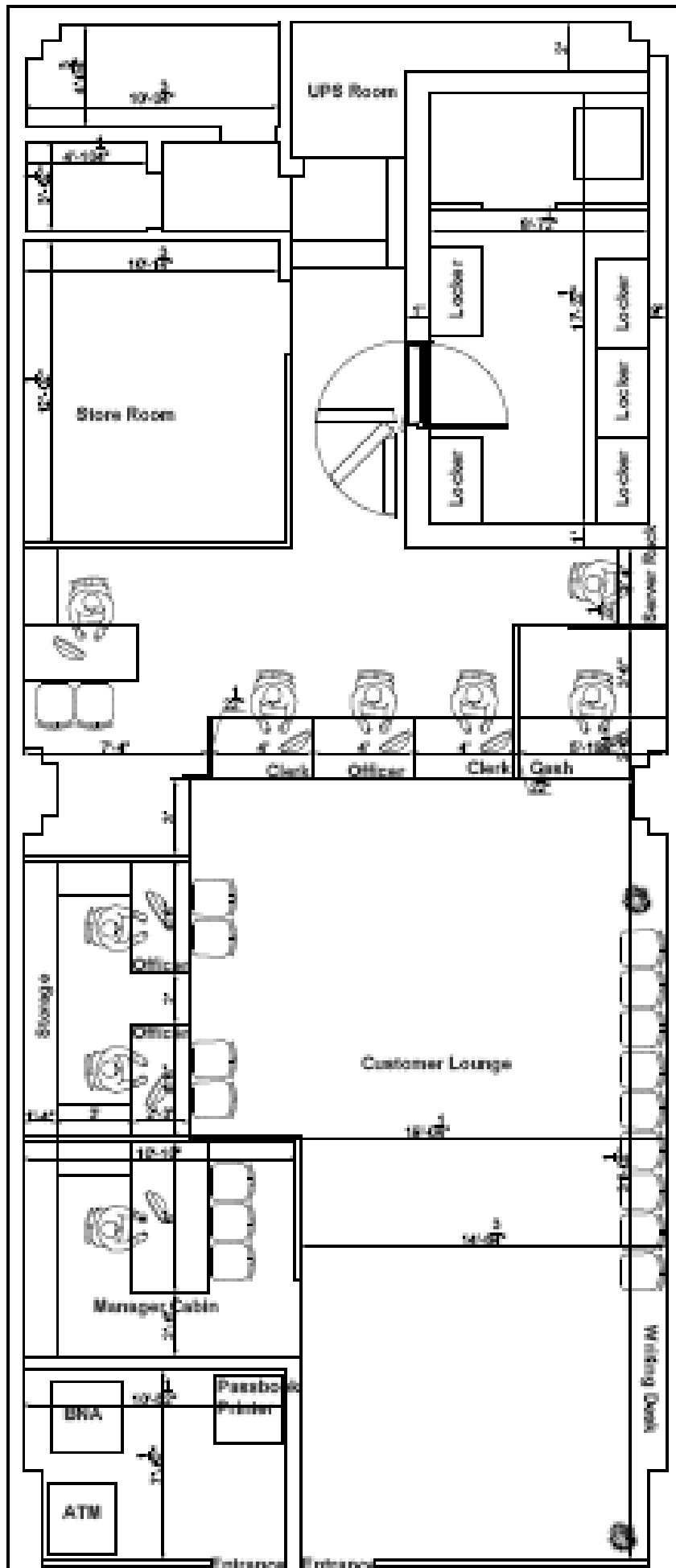
<b>ELECTRIC WORK OF BHANDUP BRANCH &amp; ATM, ORIENTAL BANK OF COMMERCE</b>				
<b>No.</b>	<b>Description</b>	<b>Quantity</b>	<b>Rate</b>	<b>Amount</b>
<b>I</b>	<b>MAIN LT PANEL /DBs</b>			
1	Supply and installation of main LT panel, wall mounted front operated totally enclosed vermin proof, indoor non-drawout-cubicle type power panel fabricated out of 2mm thk CRCA sheet having gasketed hinged cover on each cubicle fully powder coated after 7 Tank treatment, incorporating horizontal and vertical sleeved copper busbars, complete with all internal wiring, danger board, 2 earthing legs, cable chamber etc as required, housing below mentioned switch gears / meter ( GA drawing of the panel got to be approved by Bank / Architect)			
a	1No.,100A,FP, Changeover Switch + 1 no. , 100A,TP, MCCB with ELR(0-3A) and CBCT as Incomer			
b	2 nos. 40A TPN & 4 nos. 40 A DP, MCB, 2 Nos 63 A TPN MCCB outgoing			
c	1 no., 0-125A, Ammeter with CTand selector switch			
d	1no., 0-500V, Voltmeter with selector switch and fuse			
e	1Set, TPN, Copper busbars of size 20mm x 5mm thk PVC insulated suitable for 125 Amp load			
f	1 Set, RYB, indicating lamps with resistors and fuses			
	Full Set as above	1	SET	
2	Supply and installation of 4 way, TP&N 'MCB type Distribution Board(double door) flush mounted on wall, sheet metal fabricated, powder coated, having dust-proof and vermin 'proof, gasketed and hinged door with all internals such as DIN rails, neutral-link, interconnected wiring, complete with earthing legs, housing following switch gears ( Double door HORIZONTAL DB) - <b>lighting db</b>			
a	1 no., 40A, TPN, ELCB(100mA) incomer			
b	12 nos, 16A, SP, MCB outgoing			
	Full Set as above	1	SET	
3	Supply and installation of 4 way, TP&N 'MCB type Distribution Board(double door) flush mounted on wall, sheet metal fabricated, powder coated, having dust-proof and vermin 'proof, gasketed and hinged door with all internals such as DIN rails, neutral-link, interconnected wiring, complete with earthing legs, housing following switch gears ( Double door VERTICAL DB) - <b>power db</b>			
a	1 no., 63A, TPN, MCCB incomer			
b	12 nos, 25A, SP, MCB outgoing			
	Full Set as above	1	SET	
4	S & I of SPN, DB for distribution of input power to UPSs as per SLD having below mentioned switchgears (Earth bar inside these DB should be insulated from the body) (UPS-INPUT & ATM Room- HORIZONTAL DB)			
a	1 no,40A, DP, Isolator incomer			
b	3 Nos. 40A, DP, MCB, outgoing			
	Full Set as above	1	SET	
5	S & I of SPN, DB for distribution to all computer power points on workstations, having below mentioned switchgears (Earth bar inside these DB should be insulated from the body) (UPS-OUTPUT-DB)			
a	1 no, 63 A, SPN, MCB, incomer			
b	6nos, 16A, SP, MCB, outgoing			
	Full Set as above	1	SET	
6	S & I of 20A, metal clad 3 pin socket with plug top along with 1no. 20A, SP, MCB, all housed in sheet metal powder coated 20 A DP MCB box for giving supply to A/C machines & power supply to Strong room. Rate includes 2 x 4 + 1 x 2.5 sq.mm copper wires circuit through 25 mm HMS PVC conduit.	7	Nos.	
8	15 AMP Three Pin Top	1	Nos.	
9	63 amp 4 POL MCB + MS BOX	2	Nos.	
	<b>Sub Total</b>			



<b>II</b>	<b>CABELS / MAINS</b>				
1	S & I of 1100V grade armoured cable having sector / circular shaped aluminium / copper conductor PVC insulated cores, laid up, PVC tape wrapped inner sheathed, GI strip / wire armoured and overall extruded PVC sheathed conforming to IS: 1554, laid on wall or ceiling using GI clamps and spacers as per route shown at site and further as directed by Bank / Architect in the following sizes including S & I of end termination of above mentioned cables including compressed type brass glands, crimping type coper lugs, insulation tape etc. as 'required complete with earthing of glands in following sizes.				
a	4C x 16 Sq.mm Copper	5	Mtr.		
b	4C x 6 Sq.mm Copper	20	Mtr.		
c	2C x 4.0 Sq.mm Copper	40	Mtr.		
d	2Cx 10Sq.mm Copper	20	Mtr.		
	<b>Sub Total</b>				
<b>III</b>	<b>WIRING</b>				
1	Supply & Installation of concealed point wiring using 600V grade 2.5 sqmm copper conductor PVC insulated wires (with proper R,Y,B color code ) pulled through heavy gauge PVC conduits laid concealed over false ceiling or in wall chases including circuit wires from the relevant DB and also including 1.5 Sq.mm Green Colour Copper earth wire and provision of grid plate type ( ROMA) switches and sockets as approved by Bank / Architect. Each circuit feeding not more than 8 points / 800 W as per the following configuration.				
a	Primary light points including the cost of 5A switch	55	Pts.		
b	Secondary light points looped from the above point	10	Pts.		
c	5A plug point as primary point	10	Pts.		
d	Secondary 5A Plug point on switch board	10	Pts.		
e	15A Plug Point directly taken from DB for hotplate/geyser / zerox / fridge	10	Pts.		
f	Exhaust fan point consisting of 5A socket near fan and switch on light switch board	3	Pts.		
g	Wiring for Signages with 2R x 2.5 Sq.mm and 1R x 1.5 Sq.mm, PVC insulated copper conductor flexible cable to be connected to the SPN D/D consumer unit installed near rolling shutter outside the Branch	2	SET		
h	S & I of point wiring for UPS or stabilized power plug points on workstations / table for computers using 3C X 2.5 Sq.mm Cu. PVC sheathed white color flexible cable <b>pulled through above False ceiling and cutting the walls as raceways are not provided</b> and taken upto table top using PVC rigid or flexible conduits run within wooden or metal partitions. Each point consisting of 3 Nos of 2 / 3 Pin sockets and 1 No 15A switch, wired together forming one point. Switches and sockets to be (ROMA). Earth wire to be of Green colour only. ( Only 2 tables served by one circuit from UPS DB) <b>Cost is inclusive of necessary cutting the walls and including PVC Pipe required for taking the wires.</b>	12	Pts.		
i	S & I of points similar to above but to be used as raw power point on the tables consisting of one 5/15A socket with switch of other color and flexible cable of black color & circuit taken from Llighting DB ( 4 tables served by one circuit from LDB/PDB) <b>Taken Above False ceiling and through walls as raceways are not provided. Cost is inclusive of necessary cutting the walls and including PVC Pipe required for taking the wires.</b>	10	Pts.		
	<b>Sub Total</b>				

<b>IV</b>	<b>FLOOR -RACE WAYS:</b>				
1	S & I of floor - raceways consisting of 2 Nos of 3" x 1.5"x 3mm thick rectangular aluminium anodized box sections including chasing and refilling as per the route shown in the drawing and as approved by consultant at site including clamping at every open pipe ends by suitable plastic end covers against entry of dust or anyother foreign material.	30	Mtr.		
2	S & I of galvanised floor junction boxes with SS brushed finish 14 SWG ( 2mm Thick) cover properly fixed with screws, for above mentioned raceways , of size 300mm x 300mm x 2.5 mm depth, fabricated out of 2.5 mm thick G.I. sheet with proper cutouts on the sides for pipe entry & screwed top cover with rubber gasket and suitable knockouts for flexible conduit outlets as per the drawing enclosed.	8	Nos.		
	<b>Sub Total</b>				
<b>V</b>	<b>FITTINGS &amp; FIXTURES</b>				
1	S & I of lighting fixtures as per the details given below including necessary hardware such as clamps,nuts, bolts, nails, screws and suspension chains as required for fixing the fixtures in position as directed by architect / Consultant.				
a	40/36 watt LED light fitting (Basic Rate of Supply of Light Fitting is Rs 4500)	20	Nos.		
b	1 X 20W LED Tubelight with all fittings	10	Nos.		
c	16/15 watt LED light fitting (Basic Rate of Supply of Light Fitting is Rs 1600)	25	Nos.		
d	1 X 13W, LED lamp	2	Nos.		
e	250mm dia wall mounted exhaust fan of decorative plastic body and blade with louvers on the outside (Newtek/ Cromton/ Approved Equivalent)	3	Nos.		
f	Supply, Installation, Testing & Commissioning of 48" ceiling type fans 230V Single phase, electronic fan regulator, S type hook, with all accessories. The rate shall include connection with 3 core 1.5 sq.mm. flexible copper cable from point to the ceiling fan.	2	Nos.		
g	Supply, Installation, Testing & Commissioning of LED Rope Light for cove lighting as directed etc. complete.	40	Mtr.		
h	Supply, Installation, Testing & Commissioning of wall mounted fan with all accessories. The rate shall include connection with 3 core 1.5 sq.mm. flexible copper cable from point to the fan.	8	Nos.		
	<b>Sub Total</b>				
<b>VI</b>	<b>EARTHING</b>				
1	S & I of earth pit comprising of 600mm x 600mm x 3mm. thick copper plate buried at a minimum depth of 2.5 meter including necessary materials like charcoal, salt etc as required conforming to BIS standards having brick masonry chamber with hinged cover and watering arrangement.	2	Nos.		
2	S & I of copper /GI earthing wires/strips in following sizes				
a	8 SWG copper bare wire	10	Mtr.		
b	25mm x 3mm thick GI strip	10	Mtr.		
3	S & I of isolated earthing / grounding system for computers etc.using insulated green copper earthing wire laid through 20mm PVC conduits from separately made earth pit to the equipment in following sizes				
a	6 sqmm copper in 20mm PVC conduit	20	Mtr.		
	<b>Sub Total</b>				

<b>IX</b>	<b>WIRING FOR DATA AND VOICE OUTLETS</b>				
1	Providing and laying Cat 6 cable (Make : Systimax) for data in conduits and providing & terminating with RJ-45 (Krone make) with face plates / I/O Ports in suitable modular / MS box from server / EPABX room to individual work stations and terminating other end with RJ-45 connector including numbering with ferule etc. complete.				
a	RJ-45 for data points (Through wall, false ceiling, raceway)	14	Pts.		
b	Supply and fixing of 24 port patch panel (D-link) complete with crimping	1	Nos.		
c	Supply and fixing of 24 port 10/100 MBPS Auto sensing (UTP, RJ 45) SWITCH (D-link)	1	Nos.		
d	Supply, installation, commissioning of 12 U rack complete with power point, cooling fan and required accessories.	1	Nos.		
e	Supply and fixing of 1 meter long factory crimped patch cord.	14	Nos.		
f	Supply and fixing of 2 meter long factory crimped patch cord.	14	Nos.		
2	Providing and laying Cat 5 cable (Make: D-Link) for voice in existing conduits for voice and providing & terminating with RJ-11 (Krone make) with face plates / I/O Ports in suitable modular / MS box from server / EPABX room to individual work stations and terminate the other end with RJ-11 connector or on a Crone module with numbering of each cable with Ferule				
a	RJ-11 for Voice (Through wall, false ceiling, raceway)	10	Pts.		
3	Providing, laying and connecting PVC insulated copper telephone cable of following sizes including termination in approved manner.				
a	20-pair	18	Mtr.		
4	Providing and fixing of telephone tag block (Krone) of following sizes housed in GI box with cover of suitable size including termination				
a	20 pair	1	Nos.		
	<b>Sub Total</b>				
	<b>TOTAL</b>				
	Discount if any				Rs.
	<b>NET TOTAL</b>				<b>Rs.</b>
	Add 18% GST				Rs.
	<b>GRAND TOTAL</b>				<b>Rs.</b>
NOTE: The above quantities are approximately taken for estimation purpose they may increase or decrease. Contractor will be paid for actual work executes against each item. Brief specifications are given for each item. Minor verification in design and specification for each item are likely for which no extra payment will be given. Any of these items may be cancelled.					
NOTE: Cost inclusive of Transportation, loading, unloading expenses, Excise Duty etc. without any extra charge. The Contractor estimate shall also include MMC / Local Authorities Permission for smooth functioning the work.					



**INTERIOR LAYOUT OF BHANDUP BRANCH OF ORIENTAL BANK OF COMMERCE**



DATE	10/10/2018
BY	ARCHITECT
PROJECT	INTERIOR LAYOUT
SCALE	1:100
PROJECT NO.	18/10/18/01