



BANK OF MAHARASHTRA
LOKMNAGAL, 1501, SHIVAJINAGAR,
PUNE-411 005

TENDER DOCUMENT FOR ELECTRICAL WORK FOR INTERIOR RENOVATION AT 2ND
FLOOR, LLMS DEPRATMENT AT PIMPRI PREMISES, PUNE.

Date of Issue: 12th November 2018

Last date of submission: up to 3.00 PM on 26th November 2018

PART-I
TECHNICAL BID

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A.TENDER NOTICE

Sealed tenders are hereby invited in two parts, (I-Technical Bid and II- Price Bid) for “**The Electrical Work for Interior Renovation At 2nd floors, LLMS Department at Pimpri Premises, Pune**” from banks’ empaneled/regular electrical contractor, as per schedule of work and General Terms & Conditions:

1. Name of Work : for “**The Electrical Work for Interior Renovation At 2nd floors, LLMS Department at Pimpri Premises, Pune**”
2. Earnest Money : Rs.16,000/-
3. Tender Fee : Rs. 1000/-
4. Last Date of submission of tender : 26/11/2018
5. Last date of receipt of tender : 26/11/2018 (up to 3.00 PM) (Both Technical & Price Bids)
6. Date of opening of tender: 26/11/2018 (at 4.30 PM) (Only Technical Bid).Price bid will be opened after scrutiny of Technical bid. Price bid will be opened of those bidders who qualifies the technical bid. The date for opening of price bid will be conveyed separately to the technically qualified bidders.
7. Time for completion of job: 30 days from the date of acceptance of offer.
8. The agency shall visit/examine the site for each unit as per given time schedule or prior appointment and submit duly filled & signed Annexure-II.
9. The bidder shall attach copy of GST registration number.
10. The bidder shall attach copy of agency/company RTGS details.
11. The Tenderer/Bidder will not withdraw his/their Tender after opening of technical bid and if done so; his/their EMD may be forfeited.
12. The Tenderer/Bidder will not sublet the work (if awarded to his/their Bidder) and if it does so; the penalty shall be payable by his/their Bidder as may be decided by the Bank.
13. The offer shall remain open for at least 120 days from the date of opening of Price Bids. **The Earnest Money & Tender Fee shall be accepted separately only in the form of Demand Draft/Pay order drawn in favour of “Bank of Maharashtra” & payable at Pune, failing which the bid will summarily be rejected.**
14. PROCEDURE FOR SUBMITTING TENDERS: -
 - a. All drawings & tender papers should be duly signed.
 - b. Both the envelopes should be super scribed with envelope no., type of bid & subject with name of work.
 - c. **Envelope 1** (Technical bid) will be opened first and it shall have all the signed and stamped documents along with DD for EMD & tender fees and **Envelope -2** shall be of only Price Bid

Chief Manager (Civil Engineer)
Corporate Services Dept.

B.FORM OF TENDER

THE CHIEF MANAGER (CIVIL ENGINEER)
BANK OF MAHARASHTRA,
LOKMANGAL, 1501, SHIVAJI NAGAR
PUNE, 411005

Dear Sir

**TENDER FOR THE ELECTRICAL WORK FOR INTERIOR RENOVATION AT 2ND FLOORS, LLMS
DEPARTMENT AT PIMPRI PREMISES, PUNE**

With reference to the tender invited by Bank of Maharashtra for the captioned subject work:

- i. I / We the undersigned have carefully gone through and clearly understood, after visiting the site, tender documents comprising of the tender form, Notice of Tender, Scope of work, Specifications, terms and conditions and BOQ.
- ii. I/We hereby offer to execute the works specified in the said Memorandum within the time specified, at the rates mentioned in the financial/ BOQ and in accordance with all respects of the tender and with such materials as are provided for, by and in all other respects in accordance with such conditions so far as they may be applicable.
- iii. I / we do here by undertake to execute and complete the whole or part of the work (as desired by you) at the respective rates quoted considering the work has to be executed after office hours and on holidays and Sundays.
- iv. I/We have deposited as earnest money an amount of Rs. **16,000/-** & Tender fees of Rs 1000/- by D.D. No. _____ & _____ dated _____ on _____ bank in your favour of "Bank of Maharashtra" payable at Pune (to be handed over along with tender documents), which amount is not to bear any interest and I/We do hereby agree that this sum shall be forfeited, in the event of accepting my/our tender & I/We fail to start the work under the Contract & execute the Contract documents when call upon to do so.
- v. I / we further agree to **complete the work** included in the said schedule of quantities **within 30 days** from the date of commencement. Date of commencement shall be either one-week, from the date, the acceptance letter is issued to the vendor or day on which the vendor is instructed to take possession of site whichever is earlier.
- vi. I / We agree to pay Government, GST, General and Sales Tax (State and Central), Excise etc. for insurance and all other taxes including works contract extra, turnover tax etc. as prevailing from time to time, on such items for whom same is to be levies, and the rates quoted by me / us are inclusive of the same.

MEMORANDUM":

- i. **Description of work:** Tender for The Electrical Work for Interior Renovation At 2nd floors, LLMS Department at Pimpri Premises, Pune.

- ii. **Time allowed for completion:** 30 days from the date of commencement which shall be either one-week, from the date of issue of work order to the vendor or day on which the vendor will take possession of site whichever is earlier.

We understand that the time for completion shown above shall be reckoned from the date of commencement of the work.

Should this tender be accepted, I/We hereby agree to abide by and fulfill the term and conditions of the tender annexed hereto so far as they may be applicable or in default thereof, to forfeit the EMD and pay to the Bank of Maharashtra, the amount mentioned in the said tender conditions.

Our Bankers are:

i)

ii)

The names of partners of our firm

are:

ii)

iii)

Name of the partner of the firm

Authorized to sign:

OR

Name or person having Power of

Attorney to sign the contract

(Certified copy of the Power of

Attorney should be attached):

Yours faithfully,

Signature of Tenderer

Stamp

C.GENERAL TERMS AND CONDITIONS

Name of Work: - for “The Electrical Work for Interior Renovation At 2nd floors, LLMS Department at Pimpri Premises, Pune”

1. The work shall be done as per the instruction and prior approval of Bank’s Engineer.
2. The bidders may visit/examine the site and it’s surrounding from 12/11/2018 to 25/11/2018 on any working day between 2:00 PM to 04:00 PM by prior appointment with the Bank’s Engineer to assess the accessibility and assess the scope of works before submitting their offer. No claims later on in regard to the site and its surrounding or any matter relating thereto shall be entertained. The bidders shall arrange & maintain at his (their) own cost all materials, Tools & Plants, security (for their man/materials), storage for material and facilities to the workmen for executing the work.
3. **An Earnest Money Deposit (EMD): EMD of Rs 16,000/- (Rupees Sixteen Thousand Only) and Tender Fee of Rs.1000/- has to be enclosed along with the Technical Bid (Part-I). The EMD & Tender Fee shall be only in the form of Demand Draft drawn in favour of “Bank of Maharashtra”, payable at Pune, along with the Technical Bid, failing which the bid will summarily be rejected. No Cheque / Cash shall be accepted as EMD. However, EMD exemption shall only be allowed (on submission of valid documents as per LTN conditions) to the agency registered with the MSME/NSIC/GeM etc for Electrical works. EMD of the unsuccessful bidders shall be returned to them at the earliest after expiry of the final bid validity and latest on or before the 30th day after the award of the contract. The EMD of the successful agency (L1) shall be held back as security deposit.**
4. All the rates quoted in the tender shall be inclusive of all material, labour, royalties ,duties transportation charges, wastage WCT, octroi, duties, royalties, erection, construction, testing of material samples brought for approval, setting up mock samples for approval, tools and tackles, plant and equipment, supervision, overheads, profit and any other expenditure incurred for completion of work as per drawings and specifications etc but exclusive of GST; and shall remain firm till the completion of Work. No escalation of prices will be payable for what-so-ever reasons.
5. The bidder shall attach copy of PAN Card.
6. The bidder shall attach copy of GST registration number.
7. The bidder shall attach copy of company RTGS details.
8. Duly sealed tenders shall be dropped in the tender box /to be submitted at 1st Floor, Corporate Service dept., Lokmangal, and Pune. **Technical Bid MUST be duly signed and stamped on each page as a token of acceptance of all terms and conditions /clauses of the tender enquiry.**

9. Eligibility Criteria:

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

- a. Bidder should have valid Registration of PAN, GST , ESI , PF and income Tax clearance certificate etc

- b. The bidder should have average annual turnover of more than 17.00 lacs during the last three financial years i.e FY 2015-16 , 2016-17 & 2017-18 (Valid CA certificate to be enclosed)
 - c. The bidder should be a profitable agency & should have shown the profits in each of last three financial years i.e FY 2015-16 , 2016-17& 2017-18 (Valid CA certificate to be enclosed)
 - d. The bidder should have successfully executed minimum single work of similar type, costing more than Rs.14.00 lacs, during last three years (Proof of the same should be submitted)
OR
 - e. The bidder should have successfully executed minimum two works of similar type, costing more than Rs.9.00 lacs during last three years(Proof of the same should be submitted)
OR
 - f. The bidder should have successfully executed minimum three works of similar type, costing more than Rs.7.00 lacs during last three years(Proof of the same should be submitted)
 - g. The bidder should not have been blacklisted by any PSU Bank or enterprise /Private Bank/NBFC/Co-operative Bank/Govt department during last 05 years. A written undertaking has to be given by the bidder
10. The conditional bids shall not be considered under any circumstances and rejected without any notice.
 11. All bids shall be the property of Bank of Maharashtra, and contractors will lay no claim whatsoever on the same.
 12. Bank of Maharashtra reserves the right to reject any or all the tenders in full or in part without assigning any reasons whatsoever, and the decision of the Bank in this regard will be binding on all the bidders. Bidders not complying with any of the provisions stated in this tender document are liable to be rejected. Bank reserves the right to accept or reject any tender without assigning any reason and does not bind himself to accept the lowest tender.
 13. Payment terms as follows: - a) No advance payment will be made. b) The payment shall be made after successful completion and handing over of work in all respect.
 14. Income Tax and surcharge will be deducted as per Govt. of India rules.
 15. No Tools & Plants will be supplied by the Bank.
 16. **Defect liability / Retention / security Deposit: The defect liability period for the work shall be for period of 01 year from the completion of work. Retention of 5 % of Final bill amount which shall be interest free will be retain as security deposit for the period of 01 year and same will be released after completion of defect liability period.**
 17. Earnest Money Deposited by the successful bidder shall be converted into security deposit or release after submission of performance guarantee under clause 16 above.

18. The agency shall carried out monthly visit/inspection and carry out any defects noticed or attend the call for any defects brought to your notice by bank. Thoroughly check/service entire system two times in a year with prior approval of Bank's Engineer.
19. The rates quoted by agency shall be valid till the completion of defect liability period.
20. Any violation of instruction/agreement or suppression of facts will attract cancellation of agreement without any reference or any notice period and in such case the amount of earnest money/B.G will be forfeited/invoked.
21. Time allowed for completion of work shall be 30 days which shall be reckoned from tenth day from the date of award letter or letter of intent.
22. In case the successful bidder reviles from the offer within the validity of tender, the earnest money will be forfeited. Similarly, if successful contractor fails to commence the work within 10 day from the date of issue of award letter, the amount of earnest money will also be forfeited besides blacklisting the firm.
23. Time allowed for the work shall be strictly followed otherwise the bidder shall be liable to pay compensation at the rate of 0.5% of the tendered value of the work per week of delay on the part of the bidder subject to a maximum of 10% of the total tendered value of work. The decision of competent authority of Bank of Maharashtra on the delay shall be final and binding. However, for any reason beyond the control of the bidder the extension of time may be granted upon application by the bidder in prescribed format. No claim for any compensation during the extended period shall be entertained and the Bank's decision in this regard shall be final.
24. If bidder at any time makes default during currency of work or does not execute any part of the work with due diligence or Commits default in complying with any of the terms and conditions of the contract and does not initiate any remedy for it or takes effective steps for its remedy or Fails to complete the work(s) or items of work with individual dates of completion, on or before the date(s) so determined, and does not complete them within the period specified in the notice given in writing in their behalf by the Bank's Engineer. The Bank's Engineer without prejudice to any other right or remedy against the bidder which have either accrued or accrue thereafter, by a notice in writing to take the part work / part incomplete work of any item(s) out of his hands and shall have powers to take possession of the site and any materials, constructional plant, implements, stores, etc., thereon; and/or Carry out the part work / part incomplete work of any item(s) by any means at the risk and cost of the bidder.
25. Assistant General Manager (Corporate Services Dept.) reserves the right to terminate the contract without any reference or any notice period on account of poor workmanship, non-compliance of set norms/specifications for the works, delay in progress of work, violation of any contract provisions by the bidder, failure to start the work within 20 days from date of issue of Letter of Intent (L.O.I). The contract can also be terminated at the request of contractor within 10 days from the date of issue of LOI order. In such cases the bidder is liable to pay Liquidated damages @ 5% of tendered value besides forfeiting performance guaranty /security deposit/EMD.

26. Bank shall be fully empowered to expel any of the bidder's staff in case of any indiscipline/misconduct/violence.
27. The bidder should take extra precaution to ensure that there is absolutely no damage to the facility/property/equipment's of Bank during execution of work.
28. Water & electricity required for the job shall be made available free of cost by the Bank. However, necessary piping, valve, wiring, cabling, lamps, switches & sockets, main switches, halogen/tube light fitting and tapping from existing line/connection including labour have to be arranged by the bidder at their own risk & cost.
29. The bidder shall supply materials at site with manufacturers test certificate and challan as desired by the Bank's Engineer. Contractor has to submit Invoice along with Original copy for verification for all the materials used in the work.
30. All materials brought at site shall be got approved by the Bank's Engineer before being used. If rejected, the same shall be removed immediately. The material of only approved make shall be brought at site.
31. The bidder shall wholly responsible for their materials supplied/ installed at site till the final handing over of the complete work and temporary lockable shed/Almirah etc. shall be arranged by bidder at his own risk and cost. No accommodation/ staff/ lockable space will be provided by Bank under any circumstances.
32. No escalation in any form either of cost/materials/labours or any taxes shall be payable by the Bank during the contract period.
33. The bidder shall be solely responsible for any accident/medical/health related liability/compensation for the personnel deployed by it at Bank. The bank shall have no liability in this regard.
34. The personnel employed by the bidder will not claim any right to become the employees of Bank and there will be no Employee and Employer relationship between the personnel engaged by the bidder and Bank.
35. No tent or hut shall be allowed to be put up for workers to stay within the premises. The contractor is deemed to have inspected the site and thoroughly acquainted himself with the site conditions, availability of storage space for materials etc.
36. It may here be noted; that the entire staff and labour of the bidder will follow all the security instructions issued by the Bank from time to time and these instructions may include the provisions to make suitable barricades or temporary wall fence to ensure that the labour confines itself to the area of the work ONLY. Serious action will be taken in case any of the bidder's workmen are found to be tampering with the Bank's property. Suitable damages will be recovered from the bidder's bills if anyone is found to do so. All decisions of the Bank's Engineer in respect of the same will be final and binding on the bidder.
37. On completion of all work, bidder shall remove all surplus materials & leave the site in a broom clean condition, failing which the same shall be done at bidder's risk & cost.

38. Bidder shall be responsible for disposing off the all old dismantled waste materials away from the premises. The disposal of such materials shall be done immediately after completion of work at own risk & cost.
39. The rates quoted by bidders should be realistic and workable for each and every items. Quoting unrealistic/unreasonable lower or higher price will be treated as non-responsive bid and will not be considered for further evaluation. The decision of Bank shall be final in this regards.
40. The bidder shall ensure compliance of all statutory laws & bye laws of the central Govt./ state Govt./Municipal authorities related to the employment of their staff and all obligations under Minimum Wage Act, Workman Compensation Act, Provident Fund & Miscellaneous Provision Act, Bonus Act & Contract Labour Act 1970 etc. Bank will not be responsible for such purposes in anyway.
41. The term "Architect" refers bank appointed architect .Contractor shall during execution of work shall take instruction from bank's Engineer/ said architect. Any deviation in work, carried out by contractor without knowledge of Bank's Engineer/Architect, the same shall be rectified by contractor at its own risk and cost.
42. Tenders which do not contain the stipulated EMD or that do not fulfil any of the conditions mentioned herein, shall be rejected.
43. Fluctuations in the prices of any materials or equipment or labour etc. shall not be taken into account either for compensation for damage or for extras. The validity of the tender for acceptance shall be 120 days after submission of the tender. Validity of rates will be for a period of 6 months after the dated submission.
44. Watch and ward in respect of all plants and machinery, materials etc. at site for use in work shall be the contractor's responsibility.
45. **The contractor shall have to make his own arrangements to house his labour and staff and for their services and at no cost use the Bank's premises to house his staff & labourers**
46. All instructions regarding the execution of work shall be received from the Architects/ Bank only. Any other instruction issued directly to the contractor by anyone else shall not be binding on the Bank.
47. During execution of work the contractor must check his work with the drawings. In case of any discrepancy between the actual site conditions and that detailed in the drawings, the matter should be brought to the notice of the Architect/his representative before executing the work. The contractor shall be responsible for all the errors in this connection and will have to ratify all defects at his own cost, failing which the Bank reserve all right to get the same rectified at the risk and cost of the contractor.
48. The contractor entrusted with the work shall indemnify the Bank and the Architects against theft, mishaps in construction and injury to workmen, damage to person's property etc. He shall make good the damage at his own expense.
49. **The Bank's, shall have the power to omit or cancel, add/or alter any item of work without assigning any reason whatsoever and no claim for compensation for damage will be entertained for such omissions, alterations, additions and cancellations other than taking in account the cost involved for such changes to**

be plus or minus, and the cost shall be arrived at by the Architects taking into consideration the market rates, site conditions, etc.

50. Time is the essence of the work. All the works shall have to be completed within 30 days from the date of issue of work order (Appendix -A). If the work is not completed within the aforesaid period the contractor shall pay the Bank and the Bank shall be entitled to deduct from the money as per cl no. 23 above.
51. The contractor shall maintain satisfactory progress of work as well as maintain the desired standard of workmanship. He shall submit fortnightly progress reports to the Architect & Bank in the format approved by the Bank/Architect. If in the opinion of the Architect/ Bank the progress is unsatisfactory and/or the workmanship is unsatisfactory, the Architects shall advise the Bank to take possession of the work in as and where condition with 7 days' notice to that effect. The Bank shall then complete the entire work and rectify all the defects at the contractors cost and consequences.
52. In case the Bank /Architects are not satisfied with the quality of materials used by the contractors, they reserve the right to reject such materials/work and direct the contractor to procure such supplies such agencies they deem fit. Contractor shall rectify the defects on priority and if contractor fails to do so, bank may execute from the other agency at contractors risk and cost.
53. It is agreed that if the works are delayed (1) by force major or (2) by reasons of any exceptionally inclement weather or (3) by reason of loss or any damage by extensive fire not caused by an act or a default on the part of the part of the contractor, by earthquake or civil commotion, strikes or lockouts affecting any of the trade employed upon the works then the Bank shall make fair and reasonable extension of time for completion of works Upon the happening of any such event , causing delay, the contractor shall immediately give notice thereof in writing to the Bank in all such eventualities agrees, without accepting any contractual obligations in this behalf, to assist the contractor to the utmost extent possible to meet the situation. If no such notice as mentioned above is given within 7 days of happening of such event, no consideration for extra time on account will be given. No claim for damage or compensation will be entertained on this account and the decision on Bank/Architects will be final and binding on all parties.
54. The contractor shall submit the bills for payments along with detailed statement showing the actual works carried out under different heads of items in the format specified by the Bank. Minimum value of the work for interim payment shall be Rs.10,00,000/- .The bills for nonperishable materials on site may also be submitted and the payment by the Bank against the same shall be to the maximum extent of 75% of the value of these materials, solely at the discretion of the Bank. Bills submitted in any format other than that specified below by the Bank shall not be considered. The contractor will not be paid any interest on delayed payments.

55. **BILL FORMAT:**

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

56. **NOTE : ALL QUANTITIES IN THE BILL SHOULD BE IN CUMULATIVE.**

57. ALL MEASUREMENTS SHOULD BE IN THE ORDER OF TENDER SEQUENCE AND STRICTLY IN THE BELOW MENTIONED FORMAT ONLY.

58. **MEASUREMENT FORMAT:**

Tender Item No.	Description of Item & Location against each Measurement taken	Nos.	Length	Breadth/ width	Height	Quantity	Remarks

59. The contractor shall clear the site of work as per the instruction of the Bank/ Architects. The site of works shall be cleared of all men, material etc. belonging to the contractor. The site shall be delivered in broom clean and neat condition immediately after the job is completed. In case of failure by the contractor, the Bank shall have the right to get the site cleared at the risk and cost of the contractor.

60. The contractor shall not without the written consent of the Bank / Architects assign the Agreement or sublet any portion of works.

61. Wherever required, the Bank / Architects shall instruct the tenderer for supply of samples of items, erection of mock ups, as the case may be, and upon approval of the same, the items shall be fabricated and completed by the contractor (with or without modifications as the Architects shall instruct). The offer by the tenderer should be inclusive of the entire expense for the same.

62. The final bill from the contractor shall not be accepted under any circumstances without full & satisfactory completion of all the items of works. Any work found defective or wrongly carried out and / or as instructed by the Architects, should be rectified or replaced by the contractor at his own expense, prior to the submission of the final bill. It is to be expressly noted that no final bill will be held valid in the event of non-rectification of the defective or wrongly carried out items and completion date shall not be extended on this account under any circumstances. Defects liability period will be effective from the day of satisfactory & full completion of all items of works or as certified by the Architects.

63. In the event of work being executed on holidays and during or beyond the normal office working hours which might be required for the completion of the work within the stipulated time, utmost care to be taken not to disturb the normal working of the office, neighboring offices if such a situation exists. The contractor should take a prior permission of the Architects / Bank for the same.
64. While executing the work, considerable amount of shifting and re - shifting of several furniture items is likely to be involved. It is also likely that some items may be required to be temporarily shifted elsewhere in the premises or on any other floors. The contractor is to do the same & no extra payment against these works shall be done for by the Bank.
65. The contractor shall visit the site & get acquainted with the site conditions, access to the site, local traffic regulations, local authority regulations, availability of materials, labour tax structure etc. before submitting the tender and quote the rates accordingly. No extra charges/increase in rates shall be allowed on account of any of these or any other accounts.
66. The contractor shall have a qualified & competent supervisor on the site all the time.
67. The contractor and/or his authorized representative will attend all the meetings whenever called for and the decision taken in the meeting by Architects representative / owner's representative / consultant will be final & binding on the contractor.
68. The contractor shall extend all necessary help to the agencies of associated works like A.C. works, fire detection works and works to be carried out by the Bank agencies, in such a manner that they can carry out their works smoothly and the whole finished work must appear absolutely integrated. Nothing extra shall be paid on this account what so-ever.
69. The drawings should not be scaled & only written dimension are to be followed. Large scale details take precedence over small scale drawings. In case of any ambiguity, conflict of interpretation, generally the provisions giving more vigorous interpretation shall prevail and the Architects decisions / interpretation in this regard shall be final and binding on the contractor.
70. In case the local municipal authorities such as ward office raise objections in matters of water/electricity consumption, debris disposal etc. the contractors shall solve the matter at their end, without involving or putting financial liability on the Bank.
71. The contractor shall be bound to carry out extra items of works and wherever possible, the rate for extra item shall be derived from the rate already quoted, otherwise the rate shall be worked out at cost of material + wastage + labour + taxes + transportation + 15 % towards overheads, profit.
72. The rates shall be entered in figures as well as in words.
73. Interest free advance, subject to a maximum of 20% of the contract amount against furnishing a Bank Guarantee for equivalent amount valid for the period of contract and drawn on any Nationalized Bank. The advance shall be recovered from running bills on a pro rata basis.
74. Maximum to the extent of 75% of the nonperishable materials cost brought to site subject to verification from purchase bills showing cost of materials which are to be enclosed with the running payments bills solely at the discretion of the Bank.

75. Running Account bill (minimum value Rs. 10,00,000/-)
76. The Architect will not certify any application for payment to any contractor if there is :
- Defective items of work still uncorrected.
 - Any claims or liens filed against the contractor for failure to pay materials, labour on sub-contract amount due or reasonable evidence that indicates probable filing of such claims.
 - Damage to another contractor's work or material or both.
 - A reasonable doubt that the contract cannot be completed successfully.
 - Over payment to the contractor in any manner.
77. When the work is completed in all respects, the contractor shall intimate in advance & in writing to the Architect and the Bank to take the possession of the same. The work shall not be considered virtually complete until the Bank and the Architect have jointly inspected the work and certified in writing that this has been completed.
78. Unless otherwise instructed, the contractor shall insure the works and keep them insured comprehensively, against loss or damage by fire, riots and /or earthquake and flood at his cost @ 125 % of the contract value for a period up to 3 months after the completion of the project. The insurance must be placed with a company approved by the Bank in the joint names of the Bank and contractors for such amount and for any further sum if called to do so by the Bank. All the Bank supplied items forming a part of Erection contract shall basically constitute these further sums once they are handed over to the contractor from the Bank's stores. The contractor shall deposit the policy along with all amendments and the receipts for premium paid with the Bank within 10 days from the date of issue of work order unless otherwise instructed.
79. All quantities mentioned in the BOQ are approximate and contractor will not claim any damages for increase/ decrease in profit on account of variation in the final BOQ.
80. Any claim, dispute or difference arising out of or in connection with this agreement and which cannot be settled by mutual consultations, shall be referred to sole Arbitration or an Arbitrator to be appointed by Bank. The award of the Arbitrator shall be final and binding between the parties as per the terms and conditions of the Agreement to be executed on award of contract. The Arbitrator proceeding shall be governed by the Arbitration and Conciliation Act 1996 and shall be conducted in Pune. The agreement is subject to the jurisdiction of the courts at Pune.
81. If the dispute is not redressed within 30 days from the date of reference by a party, the parties may appoint an Arbitrator on mutual consent and if a single Arbitrator cannot be appointed on mutual consent, then each party may appoint an Arbitrator who in turn may appoint a third and the dispute may be resolved by the Arbitrators appointed as per provisions of Arbitration and Conciliation Act. The Award of the Arbitration shall be final and binding on both the parties.
82. If the Arbitrator so appointed is unable or unwilling to act resigns to appointment or vacates his office due to any reasons whatsoever another sole Arbitrator shall be appointed as aforesaid.
83. The work under the contract shall, however, continue during the arbitrator proceedings and no payment due or payable to the contractor shall be withheld on account of such proceedings.

84. 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.
85. The Arbitrator may from time to time, with the consent of the parties, enlarge the time for making and publishing the award.
86. The Arbitrator shall give a separate award in respect of each dispute or difference referred to him. The Arbitrator shall decide each dispute in accordance with the terms of the contract and give a reasoned award. The venue of arbitration shall be such a place as may be fixed by the Arbitrator in his sole discretion.
87. The fees, if any of the Arbitrator shall, if required to be paid before the award is made and published, be paid half by each parties. The costs of the reference and of the award including the fees, if any, of the Arbitrator who may direct to and by whom and in what manner, such costs or any part thereof shall be paid and may fix or settle the amount of costs to be paid.
88. The award of the Arbitration shall be final and binding on both the parties.
89. Subject to aforesaid the provisions of the Arbitration Act 1940 or any statutory modification or re-enactment thereof and the rules made there under, and for the time being in force, shall apply to the arbitration proceedings under this clause.
90. In all cases where the amount of the claim in dispute is Rs. 75,000/- (Rupees seventy-five thousand only/-) and above, the arbitrator shall give reasons for the award.

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

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

Date :

Seal & Signature of Tenderer,

D: APPENDIX: TIME SCHEDULE

1	Period of Completion	:	30 (Thirty) days including holidays, Sundays
2	Defects Liability Period (DLP)	:	12 (Twelve) months from the date of Completion of work
3	Date of Commencement	:	As per the work order
4	Liquidated Damages for Delay	:	As per the work order
5	Period of final measurement	:	30(Thirty) days.
6	Value of work for Interim Certificate(RA bill)	:	Minimum of Rs. 10.00 (Ten) lakhs
7	Period of honoring interim Certificate	:	Total 15 working days. 7 working days for Architect to certify and another 7 working days for Bank to make payment.
8	Period of honoring Final Certificate	:	30(Thirty) working Days.
9	Retention Money	:	5% of Interim Bill amount subject to the ceiling of the total security deposit
10	Total Security Deposit (Maximum)	:	5% of total Executed amount of contract.
11	Initial Security Deposit including EMD	:	2% of Contract sum.
12	Earnest Money	:	Rs 16,000/-
13	Tender validity period	:	120 days

SIGNATURE OF THE CONTRACTOR.

E.ARTICLES OF AGREEMENT

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

NOW IT IS HEREBY AGREED AS FOLLOWS:

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

8. The term of "Architect" in the said conditions shall mean _____ addressed as - _____ appointed by bank, or in the event of their death ceasing to be the Architect for the purpose of this contract, such other person as the Bank shall nominate for that purpose, not being a person to whom the contractor shall object for reasons considered to be sufficient by an arbitrator appointed in accordance with the said conditions. Provided always that no person subsequently appointed to be the Architect under this contract shall be entitled to disregard or over rule any certificates or opinion or decision or approval or instruction given or expressed by or the Architect for time being.
9. The term "Consultants" refer bank appointed Architect _____ or in the event of their ceasing to be the consultants for this project, such other person or persons as by the appointed by the Architect with approval of the Bank.
10. The contract is based on item rate basis.
11. The time shall be considered as the essence of this contract and the contractor hereby agrees to commence the work soon after the site is handed over to him or from next day after the date of normal work order as provided for into the said conditions whichever is later and to complete the entire work within thirty days subject nevertheless to the provisions for extension of time.
12. All payments by the Bank under this contract will be made only at PUNE as per the Architect's certificate AND The Assistant General Manager, Corporate Services Department's certificate.

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

Witness our hand this Day of 2018.

Signed by the said presence of

Bank

Contractor

F.SPECIAL CONDITIONS OF THE CONTRACT

1.ORDER OF PREFERENCE:

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

2. INSPECTION OF DRAWINGS:

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

3. CONTRACTOR TO SITE:

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

4. ELECTRICAL SUPPLY:

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

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

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

- A) Labour maintenance fixing. Arranging, cleaning, making good hauling etc.
- B) Plants double scaffolding, framework, English ladder ropes, nails spikes tools materials and workman like protection from weather temporary supports platform and the maintenance of the same.
- C) Covering for the walling and other works during inclement weather or strikes or whenever directed as necessary.
- D) All temporary canvas lights. Tarpaulin, barricades work sheds etc.
- E) All starts and steps any other requisite of the works.
- F) All such temporary weatherproof shade at such places and in such manner approved by the consultant for the storage and protection of the material against the effects of sun and rain.

- G) All such temporary fences, guards, approaches and the roads are may be necessary for the contract works and to safeguarding the public.
- H) No tools and plants shall be issued by the Bank under the contract.
- I) The rates quoted by the tenderers in the schedule of probable will be deemed to be for the finished work.

7. CONTRACT AGREEMENT:

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

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

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

9. ACCESS OF INSPECTION:

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

10. DIMENSIONS:

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

11. PROGRAMME OF THE WORK AND PROGRESS REPORTS:

The contractor should furnish along with his tender a pert chart based on the master pert chart enclosed with the tender. The master chart indicates the time factor within the success full contractor will be expected to complete the works as entrusted to him in its entirely the contractors are to supply details to fit into the master pert chart indicating their detailed operation of the construction and the dates of which the various materials will arrive at the site and be installed, based on time of completion as fifteen weeks. The contractor on starting the works shall within a month furnish to the bank a detailed program for carrying out the work stage by stage in the stipulated time. A graph chart of individual work shall be

maintained showing the progress week by week. The contractor shall submit to Consultant/Bank a week progress report stating the number of skilled and unskilled labours employed on the works, working hours effected quantity of work done during the period.

12. STORES AT THE SITE

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

14. FACILITIES TO SUB CONTRACTOR AND OTHER CONTRACTOR:

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

15. TESTING OF WORKS AND MATERIALS AND PREPARATION OF SAMPLES:

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

16. NOTICES:

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

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

The contractor shall take joint measurement with the Bank/consultants representative before covering up or otherwise placing beyond the reach of measurement any of items of work. Should the contractor

neglect to do so, the same shall be uncovered at the contractor's expenses or in default thereof, and no payment or allowance shall be such work of the material with which the same was executed.

18. WORKS AT NIGHT:

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

19. WORKS ON HOLIDAYS:

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

20. ITEM of BOQ WHERE THERE IS NO SPECIFICATION:

In case of any class of work over which there is no specification mentioned the same shall be carried out in accordance with the latest Indian standard specification and as per standard practice and as a necessary requirement to complete the item/job, subject to the approval of the Consultant/Bank. No additional payment will be made for the same. Bidder shall quote the rate for every item, considering aforesaid requirement.

21. REPORTING OF ACCIDENT TO LABOUR:

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

22. CLEARING THE SITE OF WORKS:

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

23. OCCUPATION OF PARTIALLY COMPLETED PORTION BY THE BANK:

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

24. TYPOGRAPHY OR CLEARICAL ERRORS:

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

25. INFORMATION TO BE SUPPLIED BY THE CONTRACTOR:

The contractor shall be furnish the Bank the following detailed industrial static regarding the labourers employed by him etc.

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

26. WAGES OF LABOUR EMPLOYED BY THE CONTRACTOR:

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

27. EXTRA ITEM/DEVIATIONS:

The contractor shall not commence work in respect of any extra items deviations without obtaining prior approval of the Bank in writing. The contractor shall then immediately submit the rate analysis for such time, with necessary data to support the rate quoted. The rate shall then be settled by the Bank before incorporation the items in the interim bills. The pricing will be done as per the estimated requirement of materials and labour including their cost plus 15% to cater for the overheads and profits of the contractor. No interim bill shall contain any items for which the rates are not settled.

28. INSURANCE POLICIES:

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

29. INDEBTEDNESS AND LIENS:

The contractor agrees to furnish the Bank from time to time during the progress of the work as requested, verified statements showing the contractor's total outstanding indebtedness in connection with the work covered by the contract. Before final payments made the Bank may require the contractor to furnish the connection with the contract if during the progress of work. the contractor shall allow any indebtedness to acquire to sub-contractors or other shall fail to pay or discharge same within five days after demand then the Bank may withhold any money due to the contractor until such indebtedness is paid to apply the same towards the discharge thereof.

30. INDEPENDENT CONTRACTOR:

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

31. WORK PERFORMED AT THE CONTRACTORS RISKS:

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

PREAMBLE TO SPECIAL CONDITIONS OF THE CONTRACT

General,

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

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

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

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

APPENDUM TO SPECIAL CONDITIONS OF THE CONTRACT:

1. Please note that prices shall be firm for the duration of the contract plus all authorized extensions of the time plus four months period after completion of work. All rates will be treated as including all taxes. Octrio duties levies excise including turnover tax sales tax surcharge on S T etc. But excluding GST.
2. The contractor is to furnish the interior work so as to serve as guidelines for working out the rate analysis for extra/deviated terms.
3. The contractor is to quote for all the sections of the bill of quantities are approximate. They are likely to vary. Any variation in quantities will be binding on the contractor.

4. Variations in quantities. The quantities mentioned in the bill of quantities are approximate. They are likely to vary. Any variation in quantities will be binding on the contractor.
5. Submission of samples the samples of all the materials, polishes stipple paint etc. shall be submitted to Bank/Consultants in large size stipple pant panel for their approval before commencement of work. If samples are not produced to the satisfaction of Architect/bank the contractor is likely to be asked to approach other sub-contractor of repute and proven ability to prepare the sample of required workmanship This decision, in that case shall be binding on the contractor.
6. Bank/Architects reserve the right to ask the contractor to prepare mockup of any for their before proceeding with the work
7. In case of non-availability of any material mentioned in the list of approved material mentioned in the list of approved and manufactures the contractor shall intimate the Bank/Consultant in writing enclosing the details specification and samples of the material suggested by him before proceeding with the work that material. Such alternative material shall be used only after Consultant's/Bank's written approval. Such material shall be of standard quality adhering to BIS standard.

SCAFFOLDING:

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

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

SAFETY CODE:

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

G. Annexure-I

DECLARATION BY THE BIDDER

This is to certify that I/We before signing this tender have read and fully understood all the terms and conditions contained herein and undertake myself/ourselves to abide by them.

Enclosures:

1. DD/Pay Order No.....
2. Terms & conditions (each page must be signed and stamped with the seal)
3. Financial Bid. (Signature of Bidder with seal) Name: Address: Date:

NOTE: Submission of all the documents mentioned above along with declaration, is mandatory. Non submission of any of the documents above will render the bid to be rejected. Also, non-adhering of any of the terms and conditions of will render the bid to be rejected.

Date:

Signature of Bidder

Stamp

H. Annexure-II

Certificate/Undertaking

- a) Certified that I / we have visited the site on _____ and assessed the nature and amount of work involved before submitting our offer. We will be able to execute the work within the available site condition.
- b) I undertake that I / we have visited The place of **Electrical Work for Interior Renovation At 2nd floors, LLMS Department at Pimpri Premises, Pune**”, and noted the quantities, floor space, existing electrical connections etc.
- c) Manpower & Materials supplied by us will be suitable for in the existing location / condition with sufficient space all around. No extra cost will be claimed by me later for any difficulties/modifications involved for total execution of all the electrical works mentioned in the tender. I also understand that the work, if required to be completed on priority basis, so we are ready to work in day / night hour subject to availability of site/space.

(Signature of Bidder):

(NAME):

(SEAL):

Note: Above certificate/ undertaking is to be given on the Letter Pad of the Bidder

I.SPECIFICATION ELECTRICAL WORK

Section I

Light & Power Wiring

1.0 Concealed Point Wiring / Conduiting

A.0 Conduiting:

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

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

A.1 Wiring:

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

Under the scope of point wiring Contractor has to quote considering With Material Job Basis for installation of point with all accessories like junction boxes, bends, conduits, pull boxes, ceiling rose, round hylam plates (white color) wind wires. The switchboard supply is to be considered only if it is specified in the bill of quantities, however installation work of switchboard shall be considered as included in point wiring. The

call bell points, which will be done in a similar way as in point wiring and shall be paid in similar way. Fan point wiring shall be done in same way and with the same material like point wiring. Fan regulator is not to be provided in the rate for point wiring but the space for the same is to be provided in the switchboard. Rates include fixing of fan hook box of 12.5 cm diameter and 7.5 cm height of SWGHS sheet 5 / Anchor bolt for fan hook. Contractor has to quote considering with material job basis for installation of switch board, power point with all accessories like junction boxes, bends, tee, elbow, PVC boxes on surface, MS boxes concealed in walls, switch, socket plates as specified in list of approved make.

2.0 Concealed Circuit Wiring / Mains wiring:

B.1 Conduiting :

Supply and Fixing of specified diameter 25/32/mm HGMS 16 Gauge black enameled ERW grade conduit of approved make with heavy duty accessories like bend, junction box, MS pull boxes with covers, adapters, checkouts etc. The junction boxes to be used should be 62 mm deep for wall. Separate conducting shall be done for mains/circuit wiring and in no case it should be mixed with point wiring conduits. Complete work has to be performed as per the Drawings and specifications.

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

B.2 Wiring:

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

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

C.Colour Code of Wiring

Phase Wire	Red
	Yellow
	Blue

(As per schedule of wiring given along with drawings)

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

2.0 LT Distribution Board :

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

3.0 Cable Laying in Underground Trench :

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

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

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

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

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

4.0 Cable Laying on Tray/Walls :

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

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

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

Complete work has to be executed ensuring safe installation.

5.0 Cable End Termination :

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

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

6.0 Fans and Fixtures :

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

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

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

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

7.0 Hanging type Tube light Fixtures :

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

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

8.0 Earthing :

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

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

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

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

Same process has to be adapted for all tapings also.

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

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

Telephone system

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

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

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

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

Statutory approvals

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

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

IS Specifications

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

a.	Switch fuse units on cubicle switchboards	IS-4047	1967
b.	Switchgears bus bars	IS-375	1963
c.	distribution boards	IS-2675	1966
d.	Enclosure for low voltage switchgears	IS-2147	1962
e.	PVC cables	IS-1554	1964
f.	Tabular filament lamps	IS-2410	1963
g.	Tungsten filament lamps	IS-415	1963
h.	Ceiling fans	IS-374	1966
i.	Industrial Light fittings	IS-1771	1961
j.	Water tight Electric light fittings	IS-3553	1966

k.	Steel boxes for enclosure of electrical accessories	IS-5113	1984
l.	Fittings for rigid conduits	IS-2667	1964
m.	Rigid steel conduits for electrical wiring	IS-9537	1984
n.	Accessories for rigid steel conduits for electrical wiring	IS-3873	1966
o.	Switch socket outlet	IS-4615	1968
p.	Three pin plugs and socket	IS-1293	
q.	Switches for domestic and similar purpose	IS-3854	1966
r.	PVC wires	IS-694	1964
s.	Call bell and buzzers	IS-2268	1966
t.	Earthling	IS-3043	1966
u.	Electrical wiring installation	IS-732	1963
v.	Switches	IS-3072	1965
w.	Lighting protection	IS-2309	1969

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

J.TESTING AND COMMISSIONING

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

1. Measure insulation resistance of each circuit without lamps being in place and it should not be less than 5 mega ohms to earth.
2. Before energizing, measure insulation resistance of the cable from phase to phase and that from phase to ground. Insulation resistance of the bus bar at the lighting panel from phase to phase and phase to ground shall be measured before energizing the panel and should comply latest Indian Standards Institution.
3. Current Voltage of all phase shall be measured at the lighting panel bus bar with all circuits on with fixtures and also in and all switchboards.
4. Check the earth continuity for all sockets outlets. A fixed relative position of the phase and neutral connection inside the socket shall be established for sockets.
5. The earth electrodes shall be tested for earth resistance by means of standard earth tester. The resistance between the earthing system and the general mass of earth shall not be greater than 1 ohm.
6. While crossing the expansion joints in building conduits shall be provided with flexible pipe and shall not be more than 250 mm, at both the ends of conduit proper flexible couplings shall be provided and earth wire shall be properly connected to earthing terminal of coupling.
7. Contractor should quote after site visit only. In case for cable trench, street light pole pit, earthing pit etc. or any place where contractor has to dig the earth in hard strata or rock he has to do so at quoted rates only for item. No blasting shall be allowed for such digging.
8. For earthing of street light tubular pole earth sprit shall be used. Out of 8 SWG GI wire as per standard specifications.

Annexure - 1

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

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

No steel conduit less than 20 mm in dia shall be used

Specifications of the conduit will be as per following.

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

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

K.TECHNICAL SPECIFICATIONS

Section 2

LT Panel and Distribution Boards

Important Instructions

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

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

1.0 LT Panel and distribution boards:

Scope of work under this items shall cover detailed engineering, fabrication, assembly of switchgears, testing of distribution boards at factory, delivery at site, testing of LT distribution boards for 500 V 50 HZ operation complete. Complete panel shall be fabricated at premises of approved vendor where fabrication, hydraulic /power press. 7 tank metal treatment facilities are available. The design of distribution boards shall conform to latest applicable Indian Standards. Safety codes as per detailed specifications given in bill of quantities.

2.0 Energy meter panels:

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

Enclosures:

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

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

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

The panel cubical shall be fabricated strictly as per details given in drawing. The panel shall be front operated front maintenance type, unless specified otherwise. The meters relays, indication lamps shall be provided on front doors with proper cut-outs. The arrangement to mount ACB, SFU shall be made within the panel, however operating handles, etc. shall be mounted on doors. Arrangement for earthing terminals extended flats of AL on both sides to connect 50 x 5 GI earth strips shall be provided on panel.

Ventilation:

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

Bus Bars:

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

Hardware/Miscellaneous items:

The hardware to be used in panels shall be sine plates and all joints and connections shall be made with galvanized sine coated or cadmium plated high tensile strength steel bolts/nuts/springs washer etc. The make of hardware items shall be UNBREKO/GK.W. All control wires shall be of 1.1 KV grade flexible copper of finolex /Milax make with Dowell / 3 D make copper pin type lugs. The control uses of HRC 2A/4A of

English Electric make shall be provided with ferrules for identification of wires. PVC grey casing for wires shall be provided in cubicles. All wires shall be suitably ties with PVC button straps. Appropriate rubber bushes, clamps are to be crossover of control wiring in cubicles etc.

Painting:

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

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

Incoming & outgoing termination Arrangement:

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

Components:

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

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

Closing Coils	85% to 110% or rated voltage
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Trip coils	50% to 110% or rated voltage
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For series tripping overloads, short circuits and under voltage trip circuit shall be provided. Stored energy mechanism shall be provided with mechanical indicators to shoe, charged or discharged conditions. The IDMT, CDG-31, 2 over current and 1 earth fault rely to be provided for incoming MPEB feeder.

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

Current Transformer:

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

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

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

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

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

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

Protective Relays The relay

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

Indicating Instrument:

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

Indicating Lamps:

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

Push Buttons:

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

Earthing :

An earthing strip of 50 x 6 Sq.mm. size for MEP & 25 x 6 Sq.mm. for PDBS of 'AL' shall be provided in each panel. All the CT terminals shall be earthed by two wires at different places & all metal casting of current

carrying components shall be connected to earthing strips. All the hinged doors & PCCC & PDBS shall be earthed through flexible copper wire PVC insulated & crimped at both ends.

General

1. Terminal blocks shall be of ELMEX make and of suitable capacity. Control and power terminals shall be segregated.
2. Suitable HYLAM/BAKELITE should be provided of minimum 3 mm size where bus links from busbar chamber and feeder chamber to cable chamber will be terminated.
3. All the components shall be as per the relevant ISS and shall be of highest manufacturing quality and standard. The SFU shall be of AC 23 duty only and ACB shall not have rupturing capacity less than 50 KA.
4. As given in the drawing in case of PCCS all cable chambers and bus chambers and bus chambers are in back of all out going feeders.
5. All the PCCS and PDBS have sufficient quantity of bolted type lifting lugs welded at 50 x 6 angles along the depth of panels.
6. One side of each shipping section should be pasted with gasket.

Tests to be conducted on PCCS on PDBS

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

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

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

Type of Test /Certificates

The Bidder shall produce following type tests certificate of CPRL.

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

Fire Insurance Approval

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

Inspection:

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

Drawings

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

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

Performance Guarantee

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

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

- a. IS-4237 General requirements of switchgear & control gear for voltage not exceeding 1000V.
- b. IS-375 Arrangement of busbar, main connection, auxiliaries & wiring.
- c. IS-2516 Requirement of the circuit breakers not exceeding 1000V, selection & testing.
- d. IS-4047 Specification for heavy-duty air break switches & fuses for voltage not exceeding 1000 V.
- e. IS-2208 Specification for HRC cartridge fuse link up to 650 V.
- f. IS-2507 Indian Standards for current transformers. (part - I/II/III/IV).
- g. IS-4201 Application guide for current transformers.
- h. IS-2959 Specification for AC connectors of voltage not exceeding 1000 V.
- i. IS-1822 Specification for motor starters of voltage not exceeding 1000 V.
- j. IS-5569 Electrical power connectors.
- k. IS-1336 Colour code recommendations for push buttons.
- l. IS-1248 Electrical indicating buttons.

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

L. LIST OF MAKES:

The following make of equipment and material or equivalent as approved by Architect / Bank, specify which materials he would be using and get the make and type approved from Architect/Electrical Consultant before exe quality and as per ISI specifications. Contractor shall submit a letter to the bank along with samples for the make which he is going to incorporate in the assigned contract work. Contractor has to supply copy of original challan/bills on demand to the Bank.

Sr.No.	Material	Approved Material / Quality / Suppliers
1	Meters (Ammeter, Voltmeter, Power factor meter, Frequency Meter)	AE / RISHAB / ENERCON
2	Ammeter & Voltmeter Selector Switches	Kaycee / Salzer
3	MCCB	ABB / L & T / Siemens / TC France
4	Connectors	Elemex Connectwell / Saizer / Wag
5	Energy Meters	Simco / GEC / HAVELS
6	Capacitors	KJC / Asian / Momaya Mixed / Dielec
7	MCB (10 KA Fault Level)	MDS Legrand / Merlin Gerin / Datar
8	Connectors	L & T / Elemex
9	Energy Meters	ABB / L & T / Siemens / TC France
10	CTS	AE / AVK cast Resin cts
11	Changeover switch	HAVELS / Helcon
12	CABLE (Electricals)	cci / Finolx / Nicco
13	Cable glands	GEC / Branko
14	Cable Lugs	Dowells / 3 D
15	Wires (FRLS)	RPG / RR kable
16	Telephone Wires	Dalton / RPG / Finolx
17	Enhance CAT 6 Lan Cable	D-link / Finolex
18	Telephone Arm. Cable	Finolex / Dalton (jely filed)
19	Ceiling ring speakers	PHILIPS
20	Speaker Wire	RPG/RR cable
21	PVC conduits and its Accessories	Precision
22	PV casing capping	Precision
23	Room switch, sockets	Anchor ROMA/LEGRAND
24	RJ 45 Computer socket outlet	D-Link
25	LED Light Fittings fixture	PHILIP / Wipro
26	Ceiling fan/wall fan	Crompton / Almonard
27	Exhaust fan	Crompton / Almonard

PART-II

PRICE BID

BILL OF QUANTITIES

NAME OF WORK: ELECTRICAL WORK FOR INTERIOR RENOVATION AT 2ND FLOOR, LLMS DEPRATMENT AT PIMPRI PREMISES, PUNE.

Sr.No.	Description	Qty.	Unit	Rate(Rs.)	Total Amount
A	Light Point:				
	Providing and making point wiring work using 25 mm ISI make PVC, MMS conduit with all standard accessories with 2 x 1.5 sq mm copper FRLS wire 1.1 kV. grade ISI mark complete with Anchor Roma make switch plate (concealed box if required) surface box under the false ceiling work including Junction boxes & all related accessories all complete.				
	(all above points for fan, lights, Ex.fan or Ceiling light points.)				
1	One point control by one 6 A switch.	180	Nos.		
2	Two points control by one 6 A switch.	0	Nos.		
3	Three points control by one 6 A switch.	0	Nos.		
4	Four points control by one 6 A switch.	4	Nos.		
5	One point control by two 6 A switch.	2	Nos.		
6	One bell point control by two 6 A. switch.	2	Nos.		
				Total -A	
B	Light Point/ with earthing:				
	Providing and making point wiring work using 25 mm PVC MMS conduit with all standard accessories with 3 x 1.5 sq mm copper FRLS wire,1.1 kV grade ISI mark complete with Anchor Roma plug (two & three pin) and switch plate.(concealed box if required)surface box point for UPS & Raw plug including Junction boxes & all related accessories all complete.				
1	One plug and one switch, 6 A switch/ plug.	40	Nos.		
2	Three plug and three switch, 6 A switch/plug. FOR WORK STATION	40	Nos.		
				Total-B	

Sr.No		Description	Qty.	Unit	Rate(Rs.)	Total Amount
C		Fan point:				
		Providing and making fan point work using 25mm ISI mark PVC, MMS conduit with all standard accessories with 2 x 1.5 sq mm copper FRLS wire 1.1 kV grade with ceiling rose and Anchor Roma make switch and plate with Anchor Roma step regulator (cat. No. 21496) Dura EME 120/280 V including Junction boxes & all related accessories all complete.				
	1.	One fan point control by one switch and step regulator.	10	Nos.		
	2.	Installation of Fan -only Labour	10	Nos.		
					Total-C	
D		D.B to Switch Board:				
		Providing and fixing of circuit mains DB to switch boards, using MMS conduits and 1.1 kV grade FRLS copper wire with both ends termination as per SLD and all accessories required or as per Engineer in charge.				
	1	2x 2.5 sq mm + 1 x 1.5 sq mm FRLS green copper earth wires through conduits.	1450	Mtrs.		
	2	2 x 4.0 sq mm + 1 x 1.5 sq mm FRLS green copper earth wire thro conduits.	1600	Mtrs.		
	3	2 x 6.0 sq mm + 1 x 1.5 sq mm FRLS green copper earth wire thro conduits.	80	Mtrs.		
	4	4 x 6.0 sq mm(four colour) + 1 x 1.5 sq mm FRLS	50	Mtrs.		
	5	2 x10 .0 sq mm(two colour) + 1 x 1.5 sq mm FRLS green copper earth wire thro conduits.	12	Mtrs.		
	6	2 x 10 sq mm green earth wire thro PVC conduit from UPS 'N' earthing from pit to UPS 'N' earth connection.(No. 1 for 'N' and one for 'N' of UPS plugs outgoing system earthing.	10	Mtrs.		
	7	Speaker wiring point	8	Nos.		
	8	8 watt Philips makes speaker/w	8	Nos.		
					Total- D	

Sr.No		Description	Qty.	Unit	Rate(Rs.)	Total Amount
E		16A/20A Plug point/power points:				
	1	Providing and making 16 A. / 20 A. plug point for Xerox water cooler, fridge point using 2 x 2.5 sq mm copper FRLS + 1 x 1.5 sq mm green earth wire thro MMS conduit with both end termination. (Wiring incorporated in circuit mains.) with Anchor Roma make 20 A & 10 A twin socket (cat No.30828) with 20 A switch with neuron with module plate & surface box. (if required concealed box.) including Junction boxes & all related accessories all complete	40	Nos.		
	2	32 amp mcb with encloser with 4 x 2sqmm + 2.5x 2 sq.mm + 1.5 sq.mm wiring points.	8	Nos.		
					Total-E	
F		Supply & testing Power Distribution boards:				
	1	SPN DB, 4 WAY Legrand make with 63amp 4pole mcb with installation & termination.	8	Nos.		
	2	SPN DB, 8 WAY Legrand make with 63amp 4pole+ 16amp sp with installation & termination.	4	Nos.		
	3	SPN DB, 12 WAY Legrand make Cat no - 601309	4	Nos.		
					Total-F	
G		Main Incoming Control Panel:				
		Supply and Installation of Main incoming control panel using 2mm thick CRCA sheet wall mounted , floor mounted cubical type powder coated front operated Panel with dust and vermiproof IP42 Protection , incorporated following with 200A Alu. Busbar.				
	I	<u>INCOMER</u>				
	1	160 Amp, 35 KA breaking L&T make,4pole MCCB Drh -125		Nos.		
	2	125 A, 4 Pole, On Load changeover switch, Havells HPCL/Make.		Nos.		
	3	0 to 500 V voltmeter with selector switch 7 & 3A MCB control.		Nos.		
	4	R.Y.B Indicator lamp with load ON and supply ON and DG set On.		Nos.		

Sr.No		Description	Qty.	Unit	Rate(Rs.)	Total Amount
	II	OUTGOING:				
	1	100 A ,35 KA (DU 100) L &T make with 20 x 3 mm Alu. Busbar with 'N" link for central AC supply./ 2Nos.		Nos.		
	2	63A, 4 Pole 10 KA Legrand make MCB for 3 UPS ,TPN DB, Spare.		Nos.		
	3	16 A ,SPMCB 3Nos. For Capacitor.----- -1set	1 Panel	Job		
					Total-G	
	H	Supply and making earthing station as per IS 0343 using 600 x 600 x 3.15 mm copper earthing plate with 2 nos. 25 x 3 mm copper strip with 3 Nos. each 8mm x 20 mm long SS nut bolts with stell washer for fixing including giggering upto 1.80Mtrs & refilling with charcoal, Salt & electrol powder with 12" x 12" PCC chamber with Cover for watering purpose 20mm GI pipe with holes, using 20/40 GI reducer as funnel all as per Drawing No. Earth 001For "N" earthing.				
	1	Supply & making earthing station as per IS 0343 copper.	2	Nos.		
	2	Same As above but Hot deep GI plate with 25 x 3 mm GI strip all as per specifications both testing reports.	2	Nos.		
	3	Supply & laying of 25 x 3 mm copper strip from earth station to Panel & termination with SS nut bolts.	10	Mtrs.		
	4	Supply & laying of 25 x 3 mm GI Strip from earth station to point of supply and termination with SS nut bolts.	10	Mtrs.		
					Total-H	
	I.	Main Incoming Control Panel:				
	1	Supply and laying of Cat - 6 cable from hub to each point of supply using D - Link / Finolex make Cat - 6 with both end crimping and terminations for the cable run through 25/32 ISI make MMS conduits with required accessories and pull boxes with numbering to both ends all complete	1850	Mtrs.		
	2	Supply and fixing of RJ 45 socket outlet of D - Link make double type with surface or concealed box.	R.O	Nos		

Sr.No		Description	Qty.	Unit	Rate(Rs.)	Total Amount
	3	Supply Installation testing of computer 24 port hub /switch rack of D - Link make with power supply.	R.O	Nos		
					Total-I	
J.		Telephone Points:				
	1	Supply and Installation of telephone point using Anchor Roma make Cat. No. 20846, telephone jack double with surface box and end termination.	40	Nos.		
	2	Supply and laying of 2 pair telephone wire .5 sq mm Finolex / Delton make through 20 mm PVC MMS conduit from EPABX to each point switch both end termination.	1150	Mtrs.		
	3	10 Pair Telephone Wire	85	Mtrs.		
	4	10 Pair Telephone Crone Box with Crone	4	Nos.		
	5	Supply and Installation testing and commissioning EPABX model as per requirement and Clint specification with battery backup.	1	Nos.		
	6	Installation testing and commissioning of telephone instrument as per EPABX mode, and as per supplied by clients.	1	Nos.		
					Total-J	
K.		Supply & laying testing commissioning of 1.1 KV grade LT Alu Arm Cable ISI make.				
	1	Supply and laying of 120 x 4 al cable testing commissioning of 1.1 KV grade LT Alu Arm cable ISI make.	30	Mtrs.		
	2	Flange type cable gland with Alu Lugs crimping	30	Nos.		
	3	If any civil work required for wall, ground or tile cutting for above cable laying.	200	S.ft		
	4	Supply & laying/fixing on wall with clamps & hardware for 25 sq mm,4 core,Alu.,Arm., ISI mark cable from main panel to AC unit.	85	Mtrs.		
					Total-K	
L.		Supply & Installation of 2' x 2' LED Panel of Philips / Wipro make with testing.	150	Nos.		
					Total-L	

Sr.No		Description	Qty.	Unit	Rate(Rs.)	Total Amount
M.		Supply and Installation of 1 x 28 W LED Tube of Philips/Wipro for indirect & direct lighting.	15	Nos.		
					Total-M	
N.		CCTV with DVR:				
	1	Dome Camera Dahua Make 1/2.9" 2 MP CMOS, 3.6mm lens, 20mtr, DH-HAC-HDW1220RP.	8	Nos.		
	2	Power Supply for Cameras SMPS 5AMP (Industrial Quality)	2	Nos.		
	3	16 channel HD DVR 2 SATA VGA, HDMI,DAHUA MAKE, DH- XVR5216A (without Hard disk)	1	Job		
	4	BNC Connectors & power connectors	25	Nos.		
	5	Cable 3+1 finolex make	1	Rmts		
	6	6 TB SATA Hard Disk	2	Nos.		
	7	6 TB SATA Hard Disk Installation Charges	1	Nos.		
	8	VGA cable 15 meter	1	Rmts		
					Total-N	
O.		IP Camera with NVR:				
	1	IP camera Dahua make HDW110Sp, IR ome ,25/30fps@1.3 M 3.6 mm.	7	Nos.		
	2	NVR 16 channel with 1 SATA port Matrix Make 1601X	1	Nos.		
	3	6 TB SATA Hard Disk	1	Nos.		
	4	8 Port POE Switch 1gbps	2	Nos.		
	5	Installation with RJ 45 connectors	1	Job		
					Total-O	
P.		Networking:				
	1	Dlink I/O	40	Nos.		
	2	Dlink Face plate	40	Nos.		
	3	Surface Box OEM	40	Nos.		
	4	Dlink Cat 6 Cable 7 box of 305 Mts each	55	Nos.		

Sr.No		Description	Qty.	Unit	Rate(Rs.)	Total Amount
	5	Patch Chords 1 Mtr	55	Nos.		
	6	Patch Chords 2 Mtr	60	Nos.		
	7	Installation of All Networking components including RACK, I/O boxes, Punching, Crimping, Patch Panels.	1	job		
					Total-P	

Remark – Please refer Specification of Electrical Work & Technical specification on Page no. 30 of Tender Document while quoting the rates.

SUMMARY

Sr No.	Description	TOTAL
A	Light Point	
B	Light Point/ with earthing	
C	Fan point	
D	D.B to Switch Board	
E	16A/20A Plug point/power points	
F	Supply & testing Power Distribution boards	
G	Main Incoming Control Panel	
H	Supply and making earthing station	
I	Main Incoming Control Panel	
J	Telephone Points	
K	Supply & laying testing commissioning of 1.1 KV grade LT Alu Arm Cable ISI make	
L	2' x 2' LED Panel	
M	1 x 28 W LED Tube	
N	CCTV with DVR	
O	IP Camera with NVR	
P	Networking	
	Gross Total	
	Add GST	
	Grand Total	

Grand Total (In Words): _____

Name,

Sign & Seal of Contractor