



E-TENDER DOCUMENT

FOR

REPAIRING & REVAMPING WORKS – INTERNAL & EXTERNAL (CIVIL, INTERIOR, PLUMBING & ELECTRICAL), INCLUDING STRUCTURAL RETROFITING & REPAIRING WORK AT SHIVAM RESIDENTIAL BUILDING COMPLEX, 1- FAKIR PARA ROAD, BEHALA, KOLKATA – 700 034

PART-1 (TECHNICAL BID)

ZONAL OFFICE KOLKATA CENTRAL

Date: 18.02.2025

NIT NO.: - ZO: EST: TNR: QTR: SHIVAM: 001: 2024-25

CONSULTANT:-

M/S CONSULTING DEVELOPMENT SERVICES

17 KALI BARI LANE KOLKATA 700032

CONTACT: 9831664630

Email: CDS.GANGULY@YAHOO.COM

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FORM OF e- TENDER

TO,

**ZONAL MANAGER,
INDIAN BANK
ZONAL OFFICE: KOLKATA CENTRAL
14 - INDIA EXCHANGE PLACE,
KOLKATA 700 001.**

**SUB : REPAIRING & REVAMPING WORKS (CIVIL, INTERIOR, PLUMBING AND ELECTRICAL) INCLUDING
STRCTURAL REPAIRING & RETROFITTING WORK AT SHIVAM RESIDENTIAL BUILDING COMPLEX, 1 -FAKIR
PARA ROAD, BEHALA, KOLKATA – 700 034**

Dear Sir

Having duly examined the tender documents including the specifications, bill of quantities relating to the works specified in the underwritten memorandum and having visited / inspected the site of the said works and having acquired all the requisite information relating thereto as affecting this tender, I/We hereby offer to execute the works specified therein at the rates specified in the Bill of quantities (while submitting Price Bid) and in accordance, in all respects, with the specifications and instructions in writing referred to in the conditions of tender, the Articles of Agreement, Special Conditions, if any, the Bill of quantities and Conditions of Contract and with such materials as specified, by and in all other respects in accordance with such conditions in the Bill of quantities and conditions of contract so far as applicable.

Thanking You,

Tenderers Name & Signature

Date and Company Seal:

NOTICE INVITING ONLINE TENDER (E-TENDER) NIT NO.: - ZO:EST:TNR:QTR:SHIVAM:001: 2024-25

SCHEDULE OF IMPORTANT DATES OF BIDS

Name of Work : REPAIRING & REVAMPING WORKS (CIVIL, INTERIOR, PLUMBING AND ELECTRICAL) INCLUDING STRUCTURAL REPAIRING/ RETROFITTING WORK AT SHIVAM RESIDENTIAL BUILDING COMPLEX 1, FAKIR PARA ROAD, BEHALA,; Kolkata – 700 034

PARTICULARS	DATE & TIME
Date of Issue of NIT no :- ZO:EST:TNR:QTR:001:2024-25	18.02.2025
Document download start date	18.02.2025 at 1600 Hrs
Document download end date & time	19.03.2025 at 15.00 hrs
Site visit	18.02.2025 to 17.03.2025 from 11.00 am to 16.00 pm
Pre-bid meeting On 12.03.2025: at 16.00 hrs	Venue :Indian Bank Office Building, 03 rd Floor, 14 - Indian Exchange Place, Kolkata 700 001
Bid submission start date	18.02.2025
Last date of Online submission of Technical Bid and Financial Bid.	19.03.2025: 16.00 hrs
Opening of Technical Bid (through online mode)	20.03.2025: 15.00 hrs
Opening of Financial Bid (through online mode)	Financial bids shall be opened for technically qualified bidders. Same will be published in bank's website only: www.indianbank.in
Validity of bid	120 days
Completion Period of the work	6 months to be reckoned from the 14th day of date of issue of LOI or the handover of the site, whichever is earlier.
Defect Liability Period	12 Months from the date of final bill paid by bank authority.
Work Warranty Period	For external painting work: 7 years from the date of final payment For Waterproofing Works: 10 years from the date of final payment. For all other works: 1 year from the date of final payment. Contractor has to give work warranty on Rs. 500/- stamp paper along with notary mentioning that if any type of defect noticed in warranty Period on work done area and notified by Indian Bank / Consultant, then immediately contractor has to attend the same, free of cost for all.

NOTICE INVITING ONLINE TENDER (e-tender), NIT NO.: - ZO:EST:TNR:QTR:001:2024-2025

REPAIRING & REVAMPING WORKS (CIVIL, INTERIOR, PLUMBING AND ELECTRICAL) INCLUDING STRUCTURAL REPAIRING/ RETROFITTING WORK AT SHIVAM RESIDENTIAL BUILDING COMPLEX 1, FAKIR PARA ROAD, BEHALA,; Kolkata – 700 034

INDIAN BANK, ZONAL OFFICE -KOLKATA CENTRAL invites Online (e-Tender) under TWO BID SYSTEM (**T e c h n i c a l** and **F i n a n c i a l**) from reliable, resourceful, bonafide and experienced firms / companies / individual contractors having requisite financial capability and sufficient technical credential on execution of similar nature of work. The details are given below:

1.	Name of work	REPAIRING & REVAMPING WORKS (CIVIL, INTERIOR, PLUMBING AND ELECTRICAL) INCLUDING STRUCTURAL REPAIRING/ RETROFITTING WORK AT SHIVAM RESIDENTIAL BUILDING COMPLEX 1, FAKIR PARA ROAD, BEHALA,; Kolkata – 700 034
2.	Location of Work	SHIVAM RESIDENTIAL BUILDING COMPLEX 1 - FAKIR PARA ROAD, BEHALA, KOLKATA – 700 034
3.	Scope of Work	a. AS PER SCHEDULE & SPECIFICATIONS b. OTHER WORKS AS PER THE DRAWINGS AND AS INSTRUCTED BY THE BANK AUTHORITY & ARCHITECTURAL CONSULTANT
4.	Estimated Cost of work	₹ 1,57,13,984/- (Rupees One Crore Fifty Seven Lakh thirteen thousand nine hundred eighty four only), (The above estimate excluding GST which will be paid as applicable upon submission of proper GSTIN & invoice)
5.	Completion Period	6 months to be reckoned after 14 days from the date of issue of LOI
6.	Defect Liability Period (DLP)	1 year from the date of final bill certification
7.	Cost of Tender documents (CTD)	₹ 1000/- (Rupees one thousand only). To be submitted along with hard copy of tender documents in form of DD infavour of Indian Bank Zonal Office: Kolkata Central, payable at Kolkata.
8.	Earnest Money Deposit (EMD)	2% of the estimated cost, Rs 3,14,280/- i.e Rupees Three Lakh Fourteen Thousand Two Hundred Eighty only to be deposited along with Tender Part-1 (Technical Bid) by way of Demand Draft in favour of "INDIAN BANK" payable in Kolkata Original DD / PO to be submitted to INDIAN BANK's office before the last date of tender submission along with hard copy of the tender & Xerox copy of the same to be uploaded with technical bid. The vendors registered with NSIC / MC&IT / MEITY/ MSME irrespective of the stores for service activity in related to repair & maintenance works are exempted from payment of EMD. Copy of Valid registration and documentary evidence to support the eligibility criteria for exemption should be attached with mentioning monetary limit of Rs. 60.0 Lakh or more are eligible to exempt for EMD.
9.	Initial Security Deposit (ISD)	5% of the Bid Amount (Including EMD amount). The Bidders, who are eligible to exempt for EMD have to submit ISD 3% of the Bid Amount in the form of bank guarantee; Bank guarantee shall remain valid for a minimum period of 60 (Sixty) days beyond the date of final payment.

10	Retention Money (RM)	5% against each RA Bill. Retention money shall be released after completion of DLP.
11	Total Security Deposit ,TSD = (EMD + ISD + RM)	10% of the cost. (Total Security Deposit will be released after the Defect liability Period of 1 year to be reckoned from the date of final payment.
12	Additional Security Deposit (ASD)	In case L-1 bidder quotes abnormally low rates (i.e. more than below 10% of estimated project cost), then, it is necessary to submit additional security deposit (ASD) equivalent to difference of more than below of 10% amount within 07 working days. Such ASD in the form of Bank guarantee with the validity till completion of work. The said bank guarantee will be released after completion of work along with final bill payment.
13	Solvency Certificate	Latest Bank solvency certificate of Rs.50.00 lacs and above from any bank issued not earlier than 6 months from the date of advertisement of this tender.
14	Tender Documents	The Tender Documents can be downloaded from the Bank's www.indianbank.in and e-procurement portal: https://www.tenderwizard.com/indianbank from 18.02.2025 to 19.03.2025 to up to 3.00 pm All the information/ update with regard to e-tender shall be available in Bank's website only and no separate communication will be made.
15	Required Insurance Policies and Other Covid-19 Protocol for Proposed Repair Work.	To be obtained & followed by The Contractor at his own Cost.
16	Liquidated Damages	With maximum rate @ 1% (One percent) per month of delay to be computed on per day basis based on quantum of damage suffered due to stated delay on part of Contractor. Provided always that the total amount of compensation for delay to be paid under this condition shall not exceed 10% (ten percent) of the accepted tendered value of work.
17	Payment to Contractors 1) R.A. Bill 2) Final Bill	i. R.A Bills, amounting minimum Rs 25.0 lacs, payment will be released by INDIAN BANK within 20 days of the certification of Bill by Architectural Consultant Or bank's dept. Civil Engineer. ii. Final Bill payment will be released by INDIAN BANK within 60 days of the certification of final Bill by Architectural Consultant and Department Engineer – In – Charge. iii. Entrusted contractor shall provide Structural Stability report & Certificate at their own cost after completion of work duly vetted by any Govt. Institute for releasing of Final Bill Payment.
18	Contact details	Indian Bank Zonal Office: Kolkata Central, ESTATE DEPARTEMENT (Contact: 033- 4044 2998/ 4004 5801) 14 - India Exchange Place, Kolkata 700001 E-mail - zokolkatacentral@indianbank.co.in Principal Architectural Consultant : M/S CONSULTING DEVELOPMENT SERVICES e- mail - CDS.GANGULY@YAHOO.COM Contact details : 98316 64630

IMPORTANT NOTE:

1. The bank reserves the right to reject any or all tenders/bids without assigning any reason.
2. Any query/ clarification with regard to project shall be sent to Zonal Office via e-mail as mentioned above, within 03 days from the date of pre-bid meeting. After 03 days same will not be entertained.
3. Tender received after closing date and time of submission of bid shall be rejected.
4. The rates quoted by the Tenderer shall be based only on the specifications and conditions of the tender documents.
5. Bank is not liable to make any payment to tenderers either for inspection of site or for preparation to submit the tender / bid, regardless of the conduct or outcome of the bidding process.
6. Bank reserves the right to cancel the tender of the bidder who fails to submit their tender in the prescribed format of bank.
7. The Companies who are registered with Micro, Small & Medium Enterprises and also those having valid NSIC certificate under Government Store Purchase Programme having certificate clearly indicating the amount of "Quantitative Capacity Per Annum" (amount of Quantitative Capacity Per Annum shall be more than the estimated cost of work) are exempted from the submission of Tender document fee / EMD on submission of requisite proof in the form of valid certification from MSME and NSIC.
8. Tenderer / Bidder should have registered office in Kolkata with supporting documents such as registered office address proof issued by govt. and other related authorities etc.
9. Successful Bidder shall be abide with Central / State Govt.'s Health Guide line towards COVID-19 and maintained health discipline till completion of work.
10. Successful Bidder shall adhere with Bank's rule and Regulation while working at site.
11. For any update/ information with regard to tender, bidders are requested to visit Bank's website (www.indianbank.in) or e-tender wizard.

Yours Faithfully,

**ZONAL MANAGER,
INDIAN BANK - ZONAL OFFICE, KOLKATA CENTRAL
14 INDIA EXCHANGE PLACE KOLKATA 700001**

ADDITIONAL GENERAL INFORMATION

1. Repairing & Revamping works (Civil, Interior, Plumbing and Electrical) including structural repairing & retrofitting at Shivam Residential Building Complex and the specification / & finish of the items shall be same as mentioned in the tender document.
2. You are requested to fully understand the quantum of the work listed in the items mentioned. For the day to day supervision, Contractor will post one qualified site supervisor and qualified Graduate Civil Engineer at site having knowledge of Structural Repairs, Civil Repairs, Plumbing, Waterproofing & Painting works at their cost.
3. The rates shall also include clearing of the premises during the work execution and after the work completion.
4. The rates shall include throwing of the debris from the site during and after the course of execution. All the items rates shall be inclusive of removing / demolishing / dismantling of existing work etc.
5. Even though quantity mentioned in BOQ, however work shall be executed as per site condition & requirement in consultation with Architectural Consultant & Bank's engineer-in-charge.
6. Pre-BID MEETING is arranged at Indian Bank, 3rd Floor, 14 - India Exchange Place, Kolkata – 700 001 on 12.03.2025 at 04:00 PM. All Interested bidders are requested to send their wish to raise any query in respect of this project, may do so, 2 days in advance by sending email on below mentioned email ID, prior to pre-bid meeting date. And also send the name of the representative attending the meeting.

Email to Indian Bank: zokolkatacentral@indianbank.co.in

CC to: cds.ganguly@yahoo.com (M/S CONSULTING DEVELOPMENT SERVICES)

**REPAIRING & REVAMPING WORKS (CIVIL, INTERIOR, PLUMBING AND ELECTRICAL) INCLUDING STRUCTURAL REPAIRING/
RETROFITTING WORK AT SHIVAM RESIDENTIAL BUILDING COMPLEX 1, FAKIR PARA ROAD, BEHALA,; Kolkata – 700 034**

Site Inspection Report duly signed by the Consultant

This is to certify that M/s..... (Firm name & address) visited **Shivam Residential Building Complex @ 1-FAKIR PARA ROAD,BEHALA, Kolkata – 700 034** On..... and understood the general working condition and the mode of operations of the said buildings.

Signature of CONSULTANT _____

Signature of AGENCY _____

1. Any items other than the items mentioned in the tender document shall be brought to the notice of the Consultant and Bank before executing the additional items.
2. All the rates mentioned for the items in the tender documents shall exclusive of all the GST. GST shall be paid additional as applicable as per banks policy.
3. The rates quoted shall also be inclusive of obtaining all permissions/ clearance from Local Authorities / Fire department / Electrical department etc. Any Local problem is in contractor's scope of work, including obtaining the local permissions for smooth functioning the project, Bank shall not pay any extra amount for the same.

Note: Site inspection report with duly signature of consultant, corrigendum / addendum (if any) is mandatory to upload with Technical bid on e-tender website along with tender, without which, the bid shall be rejected out rightly.

Yours Faithfully,

ZONAL MANAGER,

INDIAN BANK - ZONAL OFFICE, KOLKATA CENTRAL
14 INDIA EXCHANGE PLACE KOLKATA 700001

PRE-QUALIFICATION DOCUMENT

FOR

REPAIRING & REVAMPING WORKS (CIVIL, INTERIOR, PLUMBING AND ELECTRICAL)
INCLUDING STRUCTURAL REPAIRING/ RETROFITTING WORK AT SHIVAM RESIDENTIAL
BUILDING COMPLEX, 1 -FAKIR PARA ROAD,BEHALA, KOLKATA – 700 034

SUB: REPAIRING & REVAMPING WORKS (CIVIL, INTERIOR, PLUMBING AND ELECTRICAL) INCLUDING STRUCTURAL REPAIRING/ RETROFITTING WORK AT SHIVAM RESIDENTIAL BUILDING COMPLEX 1, FAKIR PARA ROAD, BEHALA,; Kolkata – 700 034

The intending bidders shall fulfill the following minimum Criteria for pre-qualification (PQ) bidding for the above jobs -

1.0. EXPERIENCE:

Sr. No.	Eligible Work	Value – Rs. In Lacs (Without taxes.)
1.	Three similar completed works each costing not less than	50
2.	Two similar completed works each costing not less than	80
3.	One similar completed works costing not less than	120

In the **Last Seven years** ending 31.12.2024, similar work means Structural and Civil Repairs, Waterproofing, Plumbing, Painting and related to BOQ items only. All completed work executed in INDIA only. Bidders have to make sure that all the relevant documents should be submitted/uploaded as required for Pre-Qualification. Submission of Short-fall documents after opening of bids will not be allowed.

2.0. **TURNOVER:** Average annual turnover from the works for the last three years ending 31st March 2024 should not be less than Rs. 100.00 Lacs as per the audited balance sheet.

3.0. **PROFIT / LOSS:** - Tenderer should be a Net Profit making firm and should not have made losses in the last three continuous financial years. Certificate(s) from Chartered Accountant / Statutory auditors specifying the net worth of the Applicants, as at the close of the preceding financial year,

4.0. **SOLVENCY CERTIFICATE:** - The contractor should have a latest solvency of the amount of Rs.50 lakh (Rupees Fifty Lakh only) duly issued by any **Scheduled / Nationalized / Private** Bank obtained during the last 6 months from the date of advertisement of this tender.

Other conditions:

1.0. Interested parties meeting the above Tender criteria can download the tender document from banks website www.indianbank.co.in/tenders/etender or <https://www.tenderwizard.com/indianbank> and submit experience profile, proof of meeting the above criteria, attested copies of completion / work in progress certificates from the clients, audited certified balanced sheet for the last 3 (three) years, EPF, ESIC /GST, Registration as Contractor with various PSUs, State PWDs, CPWD, MES, Railways and Autonomous Bodies, details of Technical and Administrative employees, etc., through online mode <https://www.tenderwizard.com/indianbank>. Application not accompanied by any of the above documents and EMD will be rejected at the discretion of Indian Bank. Both soft copy and hard copies are to be submitted.

- 2.0. No Joint Venture or consortium of firms shall be allowed.
- 3.0. Indian Bank reserves the right to verify the authenticity of the documents submitted by the contractors.
Indian Bank also reserves the right to reject any or all applications, split the works or cancel the process without assigning any reason whatsoever may be.
- 4.0. The Contractors shall have registered office at Kolkata / West Bengal.
- 5.0. The Contractors who are registered with any Govt. / Semi-Govt. / Govt. Undertakings / Autonomous bodies / Private Sector / Housing Societies etc. and having experience of executing above types of works under a single contract may apply with detailed certificates/ credentials to the **Zonal Manager, Indian Bank - Zonal Office, Kolkata Central, 14 India Exchange Place Kolkata 700001**
- 6.0. Duplicate copy of Technical Bid Documents to be submitted by physical mode at office address by superscripting tender documents along with pre- qualification documents at the below mentioned address on or before due date of online submission. Failure of this the bid shall be out rightly rejected.

**ZONAL M A NAGER,
INDIAN BANK – ZONAL OFFICE, KOLKATA CENTRAL
INDIAN BANK OFFICE BUILDING
02nd & 03rd Floor
14 - INDIA EXCHANGE PLACE
KOLKATA 700001**

SECTION - I

GENERAL INSTRUCTIONS TO TENDERERS

1.0. SCOPE OF TENDER BID

- 1.1. The Employer, as defined in the Tender document, hereinafter called "the Owner" wishes to receive tender documents.
- 1.2. Throughout these bidding documents, the terms "bid" and "tender" and their derivatives "bidder"/"tenderer", "bided / tendered", "bidding"/"tendering", etc. are Synonymous. Day means calendar day. Singular also means plural.
- 1.3. The approximate Estimated Value of the works is as indicated in the tender document

2.0. ELIGIBLE TENDERERS

- 2.1. This Invitation to Tender bid is open to all experienced and reputed Structural Repairs, Civil Repairs Contractors whether Individual or Sole Proprietor, Partnership firm, Private limited, or Public limited Company who satisfy the qualifying criteria. Joint ventures are not accepted.
- 2.2. The tenderers are required to forward the documents as indicated in the tender documents.

3.0. QUALIFYING CRITERIA (As given in Page No. 11 & 12 of this tender document.)

Additional Requirement: Even though the tenderers meet the above qualifying criteria, they are liable to be disqualified if they have :

- a) Made misleading or false representation in the forms, statements and attachments in proof of the qualification requirements;
- b) Records of poor performance such as abandoning the work, not properly completing the contract, inordinate delays in completion, penalty, litigation history or financial failures etc.
- c) Their business banned by any Central Govt. Department / Public Sector Undertakings, Enterprises of Central Govt or any other cooperative bodies.
- d) Not submitted all the supporting documents or not furnished the relevant details as per the prescribed format.
- e) Any one of the partners (in case of partnership firm) or any Directors in case of pvt ltd., or public ltd firm being convicted by a Court of law.

3.1. Tenderer shall submit the general information about them as per Proforma No-I

3.2. Tenderer shall submit the list of major plant & machinery available with the firm as per Proforma No.- II

4.0. SITE VISIT

- 4.1. The tenderer is advised to visit (upon prior approval), and examine the Site of Works and its surroundings and obtain for itself on its own responsibility and cost all information that may be necessary for preparing the bid and entering into a contract for construction the Works as mentioned in tender document.
- 4.2. The tenderer and any of its personnel with authority letter will be granted permission by the Employer /Owner to enter upon its premises and lands for the purpose of such visit (upon prior approval), but only upon the express condition that the tenderer, its personnel, and agents, will release and indemnify the Employer/Owner and its personnel and agents from and against all liability in respect thereof, and will be responsible for death or personal injury, loss of or damage to property, and any other loss, damage, costs, and expenses incurred as a result of the inspection.
- 4.3. Before submitting the Bid, the Tenderer shall be deemed to have satisfied himself by actual inspection of the site and locality of the works, Traffic conditions/restrictions, Availability of parking space, Transportation of materials that all conditions liable to be encountered during the execution of the works are taken into account and that the rates entered in the Price Bid document are adequate and all inclusive for the completion of work to the entire satisfaction of the Employer/Owner.

5.0. BID OPENING

5.1. Part-I of the Bid (Technical Bid) will be opened through e-mode only and (the date and time intimated in the Notice Inviting tender (NIT) mentioned in the Tender documents.

5.2. **For Financial Bid opening** : Financial bids shall be opened for technically qualified bidders and same shall be uploaded in Bank's web site along with financial bid opening date & time. The bidders have to register their company in the e-Procurement portal <https://www.tenderwizard.com/indianbank> obtain Digital Signature Certificate for participating in the online tender & reverse auction.

Note : All the update & information with regard to e-tender shall be uploaded in Bank's website (www.indianbank.in) and tender wizard website. Bidders are requested to visit the sites for details.

6.0. PROCESS TO BE CONFIDENTIAL

6.1. Information relating to the examination, clarification, evaluation and comparison of bids, and recommendations for Tender shall not be disclosed to tenderers or any of their persons not officially concerned with such process until the Tender process is finalized.

7.0. EXAMINATION OF BIDS AND DETERMINATION OF RESPONSIVENESS

7.1. The Employer shall examine the bids to determine whether they are complete, whether the documents have been properly signed and whether the bids are generally in order, and all documents as per tender document have been submitted.

7.2. Prior to the detailed evaluation, Employer shall determine whether each bid is of acceptable quality, is generally complete and is substantially responsive to the tender documents. For purposes of this determination, a substantially responsive bid is one that confirms to all the documents as specified in the Tender document without material deviations, objections, Conditionality or reservation.

- a) A material deviation, objection, conditionality or reservation is one;
- b) That affects in any substantial way the scope, quality or performance of the contract.
- c) That limits in any substantial way, inconsistent with the bidding documents, the Employers' rights or the successful Tenderer's obligations under the tender document or
- d) Whose rectification would unfairly affect the competitive position of other Tenderers who are presenting substantially responsive bids.

7.3. If a bid is determined to be not substantially responsive, it shall be rejected by the Employer.

8.0. EVALUATION OF TENDER BIDS

8.1. The bids, which are determined as substantially responsive, shall be evaluated based upon the criteria as given in qualifying criteria.

8.2. No Tenderer is permitted to canvass to Employer on any matter relating to this Bid. Any Tenderer found doing so is liable to be disqualified and his/their bid is liable to be rejected.

8.3. The Employer / consultants may visit few of the works completed / ongoing by the tenderers, whom they claim satisfying the eligibility criteria (As a part of tender process).

9.0. The application should be type-written. The applicant should sign and stamp each page of the application.

10.0. Overwriting should be avoided. Correction, if any should be made by neatly crossing out, initialing, dating and rewriting. Pages of the Tender documents are numbered. Additional sheets, if any, added by the contractor, should also be numbered by him.

- 11.0. Any information furnished by the applicant found to be incorrect either immediately or at a later date, would render him liable to be debarred from Tender / tendering / taking up of work in Indian bank. If such applicant happens to be pre-qualified/ enlisted contractor, his name shall be removed from the pre-qualified list of contractors.
- 12.0. All information called for in the enclosed forms should be furnished against the relevant columns. If for any reason, information is furnished on a separate sheet, this fact should be mentioned against the relevant column. Even if no information is to be provided in a column, a 'NIL' or 'NO SUCH CASE' entry should be made in that column. If any particulars! Query is not applicable in case of the applicant, it should be stated as "not applicable". The applicants are cautioned that not giving complete information called for in the application forms or not giving it in clear terms or making any change in the prescribed forms or deliberately suppressing the information may result in the applicant being rejected. Applications/Tender document submitted through Email will not be entertained. The Application/Tender document received after the due date and time of submission shall not be considered.
- 13.0. SITE VISIT: - The officials of Indian Bank & Consultants may visit any of the ongoing & completed works enlisted in Tender documents submitted by bidders and In case of misleading or false representation or Record of poor performance, abandoning work, not properly completing the contract, Penalised During work, etc. were seen/Found during the Site visit of the ongoing & completed works will be caused the disqualification of the bidder

eProcurement Support Desk Contact Details

Name: Mr. Kushal Bose

M/s. Antares Systems Limited

#24, Sudha Complex, 3rd Stage, 4th Block

Basaveshwaranagar, Bangalore – 560 079.

Support Contact No. 8040482000/ 7686913157

Support Email: kushal.b@antaressystems.com

1.0. SUBMISSION OF BIDS THROUGH E-TENDERING PORTAL

The Bid documents, to be uploaded as part of online bid submission, are as follows:

- a) Eligibility Criteria, along with all supporting documents required.
- b) All Annexure as per this tender on Bidder's letter head with authorizing person's signature and Bidder seal on all pages.
- c) All supporting documents and product literature in support of Technical specifications.
- d) Relevant brochures
- e) Compliance to Technical Specifications as per Technical Bid.
- f) Any other information sought by the Bank with relevant to this tender Bidder should upload all the copies of relevant documents without fail in support of their bid and as per the instructions given in tender documents. If the files to be uploaded are in PDF format, ensure to upload it in "Searchable" PDF Format. After filling data in predefined forms bidders need to click on final submission link to submit their encrypted bid.

Please take care to scan documents so that total size of documents to be uploaded remains minimum. **All documentation evidence provided to the Bank shall be in PDF Format.** The Scanned Documents shall be OCR enabled for facilitating "search" on the scanned document. Utmost care may be taken to name the files/documents to be uploaded on e-tendering portal.

2.0. BID RELATED INFORMATION

Bidders must ensure that all documents uploaded on e-tendering portal as files or zipped folders, contain valid files and are not corrupt or damaged due to any processing at bidder PC system like zipping etc. It shall be the responsibility of bidder themselves for proper extractability of uploaded zipped files.

Any error/virus creeping into files/folder from client end PC system cannot be monitored by e-tender software/server and will be bidder's responsibility only.

In addition to uploading the documents in our e-Tendering portal, Bidders should also submit the following in a sealed envelope, super scribing with the tender Reference number, due date, Name of the Bidder, etc.

Earnest Money Deposit (E M D): Note: Companies registered as Micro / Small Units under MSME / NSIC should submit documentary proof for claiming exemption for EMD.

OTHER INSTRUCTIONS

For further instructions like system requirements and manuals, the bidder should visit the e-tendering portal (<https://www.tenderwizard.com/indianbank>), click on System Requirement Manual/ User Manual.

The following 'Four Key Instructions' for bidders must be assiduously adhered to

- a) Obtain valid Digital Signature Certificate (DSC or PKI) well in advance before tender submission deadline on e-tendering portal.
- b) Register your organization on e-tendering portal well in advance before tender submission deadline on e-tendering portal
- c) Get your organization's concerned executives trained on e-tendering portal well in advance before tender submission deadline on e-tendering portal.
- d) Submit your bids well in advance of tender submission deadline on e-tendering portal (Bank will not be responsible any problem arising out of internet connectivity issues).

Note: While the first three instructions mentioned above are especially relevant to first-time users of the e-Tendering portal, the fourth instruction is relevant at all times.

General Information

All individual /Sole Proprietor / Partnership firm/ Private Limited or Public limited firms applying for pre-qualification are requested to complete the information in this form.

Sr. No.	Particulars	Details
1.	Name of Tenderer	
2.	Head Office Address	
3.	Address on which Correspondence should be done.	
	Tel. No.	
	Mobile no.	
	Fax No.	
	E-mail address	
4.	Place of incorporation / registration	
5.	Constitution of tenderer	
i)	Specify, if the tenderer is	
	a) An individual	
	b) A proprietary firm	
	c) A firm in partnership	
	d) A Limited Company or Corporation	
ii)	Attach a copy of Proprietorship or Partnership Deed or Article of Association or Incorporation of Company as the case may be	
6.	Bank solvency	
7.	Turn Over for the years given below	
	2021-2022	
	2022-2023	
	2023-2024	
8.	Give particulars of registration with Govt. / Semi Govt. / Public Sector Undertakings / Local Bodies / IT Companies.	
9.	Other details: a) EPF No. b) Labor license no c) PAN No. d) GST Registration No. (Copies to be enclosed)	
10.	Any other information considered necessary but not included above	
11.	Names and Titles of Directors and officers with designation to be concerned with this work with Designation of individuals authorized to act for	

	the organization	
12.	Was the applicant ever required to suspend works for a period of more than six months continuously after commencement of works. If so, give the name of the project and give reasons thereof.	
13.	Has the applicant or any constituent partner in Case of partnership firm, any director in case of private ltd company ever abandoned the awarded work before its completion? If so, give the name of the project and give reasons thereof.	
14.	Has the applicant or any constituent partner in case of partnership firm, any director in case of private limited company ever been debarred / black listed for tendering in any organization at any time? If so, give details	
15.	Has the applicant or any constituent partner in case of partnership firm, ever been convicted by a court of law? If So, give details	
16.	Detailed description and value of works successfully completed during the last five years as mentioned in Page no. 11	
17.	Furnish names and address of previous organization for which you have executed similar work in the recent past (At least three)	
18.	Registered Office address and Telephone number	
19.	Office address through which the work will be handled in Kolkata /West Bengal . Tenderer / Bidder should have office in Kolkata/ West Bengal with supporting documents such as registered office address proof issued by govt. and other related authorities etc.	
20.	Details of factory and its location, Machinery, technical personnel to be employed to be attached in separate sheet. (If any)	

Note: Only self-attested copies to be furnished.

Date & Place

Signature & seal of the applicant

PROFORMA - II

List of major Plant and Machinery in possession of the firm

Sr. No.	Name of Plant & Machinery / equipment	Nos. Available Owned	*Other than col. no. "C"
A	B	C	D
1.			
2.			
3.			
4.			
5.			
6.			

Date :

Place :

Signature & seal of the applicant

* In case of any arrangement for getting the equipment on lease, etc., authenticated proof of the same is to be submitted. Use separate sheets for providing more information.

PROFORMA II(a)

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

Sr. Mo	Designation	No of staffs	Names	Qualification	Professional Experience	Years of Experience in this firm
1.						
2.						
3.						
4.						
5.						
6.						
7.						
8.						
9.						
10.						

Date :

Place :

Signature & seal of the applicant

FINANCIAL INFORMATION PROFORMA III

I. Financial Analysis – Details to be furnished duly supported by figures in Balance Sheet/Profit and Loss Account for the last three years ended 31.03.2024 duly certified by the Chartered Accountant, as submitted by the applicant to the Income-Tax Department (Copies to be attached). If the audited statement as of 31.03.2024 is not available, preceding 3 years statements may be furnished. Statement as on 31.03.2024 may be submitted immediately on finalization.

FINANCIAL YEARS		19-20	20-21	21-22
(i)	Gross Annual turn-over in Works: mentioned in the NIT			
(ii)	Profit OR Loss			
(iii)	Financial position:			
(a)	Cash			
(b)	Current Assets			
(c)	Current Liabilities			
(iv)	(a) Net Working capital (b-c) (b) Current Ratio: Current Assets/Current Liabilities (b/c) (c) Acid Test Ratio: Quick Assets/Current Liabilities (a/c)			
(v)	Income Tax clearance Certificate			
(vi)	Solvency certificate from Bankers (Scheduled Bank) of Applicant. Financial arrangements for carrying out the proposed work			
(vii)	Financial arrangement for carrying out the proposed work			

Date :

Place :

Signature & seal of the applicant

Signature of Chartered Accountant with seal

PROFORMA IIIA

LIST OF SIMILAR WORKS SATISFYING QUALIFICATION CRITERIA COMPLETED DURING THE LAST 7 YEARS

Sr. No.	Clients Name & Address	Name of the work & Location	Scope of work carried out by the bidder	Agreement/ Letter of Award No. & Date	Contract Value	Date of start	Date of Completion	Reasons for delay in Completion, if any	Ref. Or Document (with page no.) in support of meeting Qualification Criterion
1.									
2.									
3.									
4.									
5.									
6.									
7.									

Date :

Place :

Signature & seal of the applicant

NOTE: Copy of Work Order/Purchase Order & Work Completion Certificate given by the Client to be submitted.

LIST OF WORKS ON HAND

S.No	Clients Name & Address	Name of the work & Location	Scope of work	Agreement/ Letter of Award No. & Date	Contract Value	Date of start
1.						
2.						
3.						
4.						
5.						
6.						
7.						

Date :

Place :

Signature & seal of the applicant

NOTE: Copy of Work Order/Purchase Order given by the Client to be submitted. In case of misleading or false representation or Record of poor performance, abandoning work, not properly completing the contract, etc. were seen during the Site visit of the ongoing & completed works of any projects of the bidders will be done by the Bank Officials/Consultants, it will cause disqualification of the bidder.

PROFORMA - IV

Certificate of Credit Facility (Solvency)

(On Bank's letter Head)

This is to certify that M/s _____, is a reputed firm / company with a good financial standing.

The firm / company is enjoying a fund-based credit facility of Rs. _____ to meet its Working capital requirements.

Signature

Name, Designation &

Address of Bank

BANK'S SEAL

NOTE: The above certificate shall be from nationalized / private / Scheduled Bank.

PROFORMA V

PERFORMANCE REPORT FOR WORKS REFERRED TO IN “PROFORMA-III” (A)

1. Name of the work / Project & Location.
2. Scope of work.
3. Agreement No.
4. Estimated Cost
5. Tendered Cost
6. Value of work done
7. Date of Start
8. Date of completion
(a) Stipulated date of completion. (b)
Actual date of completion.
9. Amount of compensation levied for delayed Completion if any.
10. Performance report based on quality of work,
Time Management and Resources : Very Good/Good/Fair/Poor

Date and Place

SUPERINTENDING ENGINEER/
CHIEF PROJECT MANAGER
OR EQUIVALENT.

SPECIAL INSTRUCTIONS TO TENDERERS

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

Time of Completion:

The entire work is to be completed in all respects within the stipulated period of 6 months. The work shall deem to be commenced within 14th day from the date of issue of Work order or date of handing over of site, whichever is earlier. Time is the essence of the contract and shall be strictly observed by the Tenderer.

The work shall not be considered as complete until the Consultants have certified in writing that this has been completed and the Defects Liability Period shall commence from the date of such certificate.

The contractor may plan and execute all the works around the clock without causing disturbance to the existing occupants of the premises. The plan of carrying out the works should be given at least one week in advance.

Extension of Time:

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

In case of such strikes or lockouts, as are referred to above, the Tenderer shall, immediately give the Indian Bank, written notice thereof. Nevertheless the Tenderer shall use his best endeavors all that to prevent delay, and shall do all that may be reasonably required to the satisfaction of the Indian Bank to proceed with the works and on his doing so, it will be ground of consideration by the Indian Bank for a extension of time as above provided. the decision of the Indian Bank as to the period to be allowed for an extension of time for completion hereunder (which decision shall be final and binding on the Tenderer) shall be promulgated at the conclusion of such strike or lock-out and the Indian Bank shall then, in the event of an extension being granted, determine and declare the final completion date. The provision in clause 12 with respect to payment of liquidated damages shall in such case, be read and construed as if the extended dated fixed by the Indian Bank were substituted for and the damage shall be deducted accordingly.

Progress of Work:

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

2. Defects Liability Period (DLP)

- (a) It must be realized that this period is for exposure of “latent defects” such as settlements, shrinkages or expansion cracks, undue weathering and wear due to faulty material and workmanship.
- (b) The DLP commences from the certified date of Virtual Completion issued by the Consultants. DLP – 1 year from the Date of issue of Virtual Completion Certificate for the work by Consultants.
- (c) Whenever the Indian Bank is of the view that the defects in the workmanship and/or materials used are likely to be apparent only over a long period, the Defect Liability Period may be extended as deemed fit.

3. Date of Commencement

Normally, Date of commencement shall be either 14 Days from the Work order issued to the Tenderer or the day on which Tenderer is instructed to take possession of the site, whichever is earlier.

4. Date of Completion

Date of completion shall be 6 calendar months for the execution of the work.

5. Period of Final Measurement

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

All hidden works shall have already been measured as the work progressed in presence of Tenderers, Indian Bank, Consultant and respective specialized consultants to check up the quality and method of installation. It should be noted that unless a longer period is stipulated, the condition of contract generally lays down three months (maximum) from the date of completion of the contract as the period of final measurement. Even though the maximum period of three months is mentioned, it shall be endeavored to complete the measurements as expeditiously as possible.

6. Period of Honoring Interim Certificate

The period shall be ten days from the date of receipt of the certificate from the Consultant along with M Book only signed by the Tenderer, Consultant and Client.

7. Period of Honoring Final Certificate

The period shall be one month from the date of receipt of the final bill certificate from the Consultant along with M book duly signed by Tenderer, Consultant and Client and statutory Certificates wherever necessary along with as built drawings of the works executed. No due certificate from self as well as from the sub agencies involved by the main contractor should be produced to the bank at the time of submitting final bill by the main contractor.

8. Retention Money

The retention percentage (I.e. deduction from interim bill) shall be 5% of the Gross value of each interim bill. The maximum amount of retention money shall be the balance amount of the Total Security Deposit. 50% of the retention amount will be refunded to the Tenderer within 180 days after completion subject to the following:

- Along with the final bill payment after issue of virtual completion certificate by the consultant. Tenderer's removal of his materials, equipment, labour force, temporary sheds/stores etc. from the site. (excepting for a small presence required if any for the Defect Liability Period and approved by the Indian Bank) The remaining 50% of the amount may be refunded 14 (Fourteen) days after the end of defects liability period provided he has satisfactorily carried out all the works and attended to all defects in accordance with the conditions of the Contract, including site clearance.

9. Receiving, Opening and Recording of Tenders

Part-A (Technical bid) & **Part-B** (Price bid) has to be submitted through on-line mode only.

Part-A tender will be opened at **15.30 hours** on the same day as the last day of the receipt. In case of postal delivery, the tenderer has to ensure that the tender is received before the due date and time. The Indian Bank will not be responsible for the damage in transit and delay in receipt of tender if any.

After technical evaluation, intimation will be given to all qualifying bidders about the date, time of opening of Financial Bid through online.

Part-B - Financial Bid - to be opened only for Technical Qualified Bidders.

GENERAL CONDITIONS OF CONTRACT

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

1. Interpretation

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

(a) Indian Bank: The term Indian Bank shall denote Indian Bank with their Corporate Office at Chennai and Indian Bank Zonal Office, Kolkata Central, 14 India Exchange Place Kolkata 700001, Salt and any of its employees representative authorized on their behalf.

(b) Tenderer: The term Tenderer shall mean (to the firm the contract is awarded) and his / their heirs, legal representatives, assigns and successors.

(c) Site: The site shall mean the site where the works are to be executed as shown within boundary in red border on the site plan including any building and erections thereon allotted by the Indian Bank for the Tenderer's use.

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

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

In case any detailed Drawings are necessary Tenderer shall prepare such detailed drawings and or dimensional sketches there for and have it confirmed by the Indian Bank/ Consultants as case may be prior to taking up such work.

The Tenderer shall ask in writing for any clarifications.

(a) "The Works" Shall mean the work or works to be executed or done under this contract.

(b) "Act of Insolvency" shall mean any act as such as defined by the Presidency Towns Insolvency act or in Provincial Insolvency Act or any amending Statutes.

(c) "The Schedule of Quantities" shall mean the schedule of quantities as specified and forming part of this contract.

(d) "Priced Schedule of Quantities" shall mean the schedule of quantities duly priced with the accepted quoted rates of the Tenderer.

2. Tenders

a) Technical Bid

The entire set of tender paper issued to the tenderer should be submitted fully signed on the every page. Signature will indicate the acceptance of the tender papers by the tenderer.

b) Price Bid-The price should be quoted in the Price Bid format attached to this bid

The schedule of quantities shall be filled in as follows:

- (a) The "Rate" column to be legibly filled in ink both English figures and English words. (b) Amount column to be filled in for each item and the amount for each sub head as detailed in the " Schedule of Quantities".
- (c) All corrections are to be initialed.
- (d) The "Rate Column" for QRO items shall be filled up.
- (e) The " Amount" column for QRO of which the quantities are not mentioned shall not be filled up.

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

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

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

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

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

The Indian Bank has power to add to, omit from any work as shown in drawings or described in specifications or included in schedule of quantities and intimate the same in writing but no addition, omission or variation shall be made by the Tenderer without authorization from the Indian Bank. No variation shall vitiate the contract. Please also refer to para 7 hereinafter.

The tenderer shall note that his tender shall remain open for consideration for a period as specified in General rules and Instructions under Item no 4. from the date of opening of the price - tender of the tender.

3. Agreement

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

4. Permits and Licenses

Permits and licenses for release of materials which are under Government control will be arranged by the Tenderer. The Indian Bank will render necessary assistance, sign any forms or applications that may be necessary. The Indian Bank / Consultant shall be indemnified against all Government or legal actions for theft or misuse of cement M.S. rods and any controlled materials in the custody of the Tenderer. It may be clearly understood that no compensation or additional charges can be claimed by the tenderer for non-availability of such materials in due time on this account or according to his own requirements.

5. Government and Local Rules

The Tenderer shall conform to the provisions of all local Bye-laws and Acts relating to the work and to the Regulations etc., of the Government and Local Authorities and of any company with whose system the structure is proposed to be connected. The Tenderer shall give all notices required by said Act, Rules, and Regulations and Bye-laws etc., and pay all fees / fines payable to such authority / authorities for execution of the work involved.

The cost, if any, shall be deemed to have been included in his quoted rates, taking into account all liabilities for licenses, fees for footpath encroachment and restorations etc., and shall indemnify the Indian Bank against such liabilities and shall defend all actions arising from such claims or liabilities. All KMC needful to be carried out by the agency at its own cost.

6. Taxes and Duties

The tenderers must include in their tender prices quoted for all duties royalties, cess and sale tax or any other taxes or local charges if applicable. GST will be payable extra as applicable. No extra claim on this account will in any case be entertained.

The tenderer shall keep necessary books of A/C & other documents for the purpose of this condition as may be necessary and shall allow inspection of the same by duly authorized representative of the Indian Bank and or the Engineer-in-charge and further shall finish such other information / document as the Indian Bank may require from time to time.

7. Quantity of Work to be executed

The quantities shown in the schedule of quantities are intended to cover the entire work as indicated in the bill of Quantities but the Indian Bank reserves the right to execute only apart or the whole or any excess thereof without assigning any reason therefore. Variation in the value is however not expected to be more than 10%.

8. Other Persons Engaged by the Indian Bank

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

9. Payment to contractors

i. For claiming this payment, the following documents are to be submitted:

- a. R.A. Bill: **-R.A Bills , amounting minimum Rs 25.00 lacs** , payment will be released by Indian Bank within 15 days of the certification of Bill by Consultant and Dept. Civil Engineer.
- b. Final Bill: - Final Bill payment will be released by Indian Bank within 60 days of the certification of final Bill by Consultant and Engineer – In – Charge.

ii. All the bills will be certified by the Consultant. And the same will be accepted by Indian Bank.

iii. No payment will be made without consultant's certificate.

10. Tenderer to provide everything necessary

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

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

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

The Tenderer shall supply, fix and maintain at his own cost, for the execution of any work, all tools, tackles, machinery's and equipment's and all the necessary centering, scaffolding, staging, planking, timbering, strutting, shoring, pumping, fencing, boarding, watching and lighting by night as well as by day required not only for the proper execution and protection of the said work but also for the protection for the public and safety of any adjacent roads, streets, walls, houses, buildings, all other erections, matters and things and the Tenderer shall

take down any remove any or all such centering, scaffolding, planking, timbering, strutting, shoring, etc., as occasion shall be required or when ordered so to do, and shall fully reinstate and make good all matters and things disturbed during the execution of the works to the satisfaction of the Indian Bank/ Consultants.

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

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

The Tenderer shall maintain a site office with site engineer to receive instruction notices or communications etc. All drawings/charts maintained on the site are to be carefully mounted on boards of appropriate size and covered with a coat of approved varnish. They are to be protected from ravages of termites, ants, and other insects. The Tenderer shall provide at his own cost all artificial light required for the work and to enable other Tenderers and sub-Tenderers to complete the work within the specified time.

The Tenderer shall arrange and use the toilets for use of their workmen and keep the same in a clean and sanitary condition to the satisfaction of the Indian bank / Public Health Authorities and shall cause such latrines and soil to be cleared away whenever necessary and shall make good all the works disturbed by these conveniences.

Every precaution shall be taken by the Tenderer to prevent the breeding of mosquitoes on the works during the construction, and all receptacles; cisterns, water tanks etc., used for the storage of water must be suitably protected against breeding of mosquitoes.

The Tenderer shall indemnify the Indian Bank against any breach of rules in respect of anti-malarial measures.

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

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

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

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

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

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

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

12. Notice and Patents of Appropriate Authority and Owners

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

13. Clearing Site and Setting out Works

The site shown on the plan shall be cleared of all obstructions, loose stone, and materials rubbish of all kinds. All holes or hollows whether originally existing or produced by removal or loose stone or materials shall be carefully filled up with earth well rammed and leveled off as directed at his own cost. The Tenderer shall set out the works and shall be responsible for the true and perfect setting out of the work and for the correctness of the positions, levels, dimensions and alignment of all parts thereof. If at any time, any error shall appear during the progress of any part of the work, the Tenderer shall at his own expenses rectify such error, if called upon to the satisfaction of the Indian Bank. The Tenderer shall further set out the works to the alternative positions at the site until one is finally approved and the rates quoted in his tender should include for this and no extra on this account will be entertained.

14. Tenderer Immediately to Remove All Offensive Matters

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

15. Access

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

16. Materials, Workmanship, Samples, Testing of Materials

All the works specified and provided for in the specifications or which may be required to be done in order to perform and complete any part thereof shall be executed in the best and most workmanlike manner with materials of the best and approved quality of the respective kinds in accordance with the particulars contained in and implied by the specifications and as represented by the drawings or according to such other additional particulars, and instructions as may from time to time be given by the Indian Bank/ Consultants during the execution of the work, and to his entire satisfaction.

If required by the Indian Bank/ Consultants the Tenderer shall have to carry out tests on materials and workmanship in approved materials testing laboratories or as prescribed by the Indian Bank/ Consultants at his own cost to prove that the materials etc. under test conform to the relevant I.S. Standards or as specified in the specifications. The necessary charges for preparation of mould (in case of concrete cube) transporting, testing etc., shall have to be borne by the Tenderer. **No extra payment on this account should in any case be entertained.**

All works to be carried out generally as per IS code.

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

All the materials (except where otherwise described) stores and equipment required for the full performance of the work under the contract must be provided through normal channels and must include charge for import

duties, sales tax, octroi and other charges and must be the best of their kind available and the Tenderers must be entirely responsible for the proper and efficient carrying out of the work. The work must be done in the best workmanlike manner. Samples of all materials to be used must be submitted displayed to the Indian Bank/ Consultants when so directed by the Engineer / Consultants and written approval from Indian Bank/ Consultants must be obtained prior to placement of order.

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

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

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

The contractor shall prepare for approval of Consultant the “Co-ordinated services drawings” for pre-planned openings so that the alterations are reduced to the minimum.

17. Removal of Improper Work

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

18. Site Engineer/ Project Management Consultant:

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

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

19. Tenderer's Employees

The Tenderer shall employ technically qualified and competent supervisors for the work who shall be available (by turn) throughout the working hours to receive and comply with instructions of the Indian Bank/ Consultants. The Tenderer shall engage at least one experienced Engineer as site-in- charge for execution of the work. The Tenderer shall employ in connection with the work persons having the appropriate skill or ability to perform their job efficiently. The Tenderer shall employ local labourers on the work as far as possible. No labourer below the age of 18 (eighteen) years and who is not an Indian National shall be employed on the work.

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

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

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

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

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

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

20. Dismissal of Workmen

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

21. Assignment

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

22. Damage to Persons and Property Insurance Etc.

The Tenderer shall be responsible for all injury to the work or workmen to persons, animals or things and for all damages to the structural and/or decorative part of property which may arise from the operations or neglect of himself or of any sub- Tenderer or of any of his or a sub-Tenderer's employees, whether such injury or damage arise from carelessness, accident or any other cause whatsoever in any way connected with the carrying out of this contract. The clause shall be held to include inter-alia, any damage to buildings whether immediately adjacent or otherwise, and any damage to roads, streets, foot paths or ways as well as damages caused to the buildings and the works forming the subject of this contract by rain, wind or other inclemency of the weather. The tenderer is also responsible for the damages/injury/accidents caused to any public in general / vehicles in general and pay necessary compensation or settlement or whatsoever in this regard.

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

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

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

23. Insurance

The Tenderer shall arrange to take “Tenderers all risk insurance policy including third party liability” & “Workmen Compensation Policy”, covering the entire period of contract till virtual completion of the contract (including extended period if any) for the entire scope of works for a risk cover not less than the contract value. The third party insurance shall be for a sum of Rs. 3 Lakh per accident.

The Tenderer shall effect the insurance necessary and indemnify the Indian Bank entirely from all responsibility in this respect. The insurance must be placed with a company approved by the Indian Bank and must be effected jointly in the name of the Tenderer and the Indian Bank and the policy lodged with the latter. The scope of insurance is to include damage or loss to the work and workman due to carelessness accident, including fire, earthquake and floods etc., damage or loss to the contract itself till this is made over in a complete state. Insurance is compulsory and must be effected from the very initial stage.

The Tenderer shall also be responsible for anything which may be excluded from damage to any property arising out of incidents, negligence or defective carrying out of this contract.

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

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

24. Accounts, Receipts & Vouchers

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

25. Measurement

All the Measurements should be taken in the presence of Bank officials and/ or Consultants. And the measurements shall be countersigned by the Bank officials.

26. Payments

All bills shall be prepared by the Tenderer in the form prescribed by the Indian Bank / Consultants. **Normally the interim bill shall be prepared subject to achieving the minimum bill value of Rs.25.00 Lakh.** The bills in proper forms must be duly accompanied by detailed measurements in support of the quantities of work done and must show deductions for all previous payments, retention money, etc.

The Indian Bank/ Consultant shall issue a certificate after due scrutiny of the Tenderers' bill stating the amount due to the Tenderer from the Indian Bank and the Tenderer shall be entitled to payment thereof, within the period of honoring certificates named in these documents. In case of delay due to some reasons in the processing of such bills for payment, an advance of 60% of the billed Amount may be paid on the request of the Tenderer for the smooth progress of the work.

The amount stated in an interim certificate shall be the total value of work properly executed and 60% of invoiced value of material brought to site for permanent incorporation into the work up to the date of the bill less the amount to be retained by the Indian Bank as retention money vide clause 8 of the Special Instructions To Tenderers, less TDS, and less installments previously paid under these conditions, provided that such certificate shall only include the value of said material and goods as and from such time as they are reasonably, properly and not prematurely brought to or placed adjacent to the work and then only if adequately protected against weather or other casualties.

The Indian Bank will deduct retention money as per tender conditions. If the Indian Bank has supplied any materials or goods to the Tenderer, the cost of any such materials or goods will be, progressively deducted from the amount due to the Tenderer in accordance with the quantities consumed in the work.

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

Indian Bank reserves the right to withhold in part or full payment of bills in case of non-compliance / violation of any terms and conditions stipulated in the agreement. The tenderer shall neither suspend the work nor claim for extension of time for nonpayment /withholding of payment on this account and no interest is also payable on the payment withheld/due.

27. Final Payment

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

The contractor has to submit Photographs of Work Executed & duly Certified by the Consultant to the Bank along with final bill documents. Along with Every bill the contractor has to submit the photographs of the work executed along with submission of Concrete test certificate, Structural stability certificate, Completion drawing I.e Swarage line, Water line, electrical wiring etc.

28. ENHANCEMENT IN RATES AND QUANTITY VARIATION

The tender rates shall be fixed, firm and applicable for any increase or decrease in the tendered quantities. The Employer / Consultant can increase or decrease any quantities to any extent or even delete particular item as per the site requirements and the contractor shall not be paid anything extra on this account. Nothing extra will be paid by the Indian Bank on account of omission /deletion of items or decrease in the quantity of items. The Bank shall not entertain any claim whatsoever from the contractor on this account. The price of all additional items / non-tendered items will be worked out on the basis of rates quoted for similar items in the contract wherever existing. If similar items are not available, the rates for such items will be derived as per standard method of rate analysis based on prevalent fair price of labour, material and other components as required with 15% towards contractor's profit and overheads.

29. UNQUOTED ITEMS

The bidders to offer their competitive rates for each and every item listed in the Schedule of rates, the bidders who have not quoted for all the items as required in the SORs shall be liable for rejection. In case a bidder who has left certain items unquoted and if they happen to be overall lowest on evaluation, then their offers shall be considered subject to the unquoted items being taken as NIL cost. The bidder shall also give a clear undertaking to the effect that they shall execute the said items (unquoted) free of cost. In the event the bidder refuses the above conditions and insists on additional cost for the unquoted items, then such an offers shall be rejected as invalid.

For Extra works at the time of work in progress the contractor should submit the reasonable rate with the rate analysis and after approval given by the Consultant/ Bank that amount will be given.

30. ABNORMAL RATES

The Contractor is expected to quote rate for each item after careful analysis of costs involved for the performance of the complete item consisting all specifications and conditions of the contract. If it is noticed that the rates quoted by the tenderer for any items are unusually high (or) unusually low it will be sufficient cause for rejection of the tender unless the owner is convinced about the reasonableness of the rate on scrutiny of the analysis for such rate to be furnished by the tenderer on demand. Not with standing anything there in stand, the rate once accepted by the owner shall be final and shall not be subject to any claim either on account of un-workability of rates or on any other ground whatsoever.

31. Substitution

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

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

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

33. Clearing Site on Completion

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

The main /Principal contractor is only responsible for the cleanliness of the site/building irrespective of numbers of sub agencies deployed by them to carryout various other works in the tender.

34. Defects after Completion

The Tenderer shall make good at his own cost and to the satisfaction of the Indian Bank all defects, shrinkage, settlements or other faults which may appear **within 12 months** after completion of the work. In default the Indian Bank may employ and pay other persons to amend and make good such damages, losses and expenses consequent thereon or incidental thereto shall be made good and borne by the Tenderer and such damages, loss and expenses shall be recoverable from him by the Indian Bank or may be deducted by the Indian Bank, in lieu of such amending and making good by the Tenderer, deduct from any money due to the Tenderer a sum equivalent to the cost of amending such work and in the event of the amount retained being insufficient, recover that balance from the Tenderer from the amount retained under General Rules and instruction General Condition of Contract Clause 28 together with any expenses the Indian Bank may have incurred in connection therewith.

35. Concealed Work

The Tenderer shall give due notice to the Indian Bank/ Consultants whenever any work is to be buried in floor / earth, concrete, ceilings or in the bodies of walls or otherwise becoming inaccessible later on, in order that the work may be inspected and correct dimensions taken before such burial,

in default whereof the same shall, at the opinion of the Indian Bank/ Consultant be either opened up for measurement at the Tenderer's expense or no payment may be made for such materials. Should any dispute or differences arise after the execution of any work as to measurements etc., or other matters which cannot be conveniently tested or checked, the notes of the Indian Bank/ Consultants shall be accepted as correct and binding on the Tenderer.

36. Escalation

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

37. Idle Labour

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

38. Suspension

If the Tenderer except on account of any legal restraint upon the Indian Bank preventing the continuance of the work or in the opinion of the Indian Bank shall neglect or fail to proceed with due diligence in the performance of his part of the contract or if he shall more than once make default, the Indian Bank shall have the power to give notice in writing to the Tenderer requiring the work to be proceeded within a reasonable manner and with reasonable dispatch, such notice purport to be a notice under this clause.

After such notice shall have been given the Tenderer shall not be at liberty to remove from the site of the works or from any ground contiguous thereto any plant or materials to subsist from the date of such notice being given until the notice shall have been complied with. If the Tenderer fails to start the work within seven days after such notice has been given to proceed with the works as therein prescribed, the Indian Bank may proceed as provided in clause 39 (Termination of Contract by Indian Bank).

39. Termination of Contract by Indian Bank

If the Tenderer being a company go into liquidation whether voluntary or compulsory or being a firm shall be dissolved or being an individual shall be adjudicated insolvent or shall make an assignment or a composition for the benefit of the greater Para, in number of amount of his creditors or shall enter into a Deed or arrangement with his creditors, or if the Official Assignee in insolvency, or the Receiver of the Tenderer in insolvency, shall repudiate the contract, or if a Receiver of the Tenderer's firm appointed by the court shall be unable, within fourteen days after notice to him requiring him to do so, to show to the reasonable satisfaction of the Indian Bank that he is able to carry out and fulfill the contract, and if so required by the Indian Bank to give reasonable security therefore. or if the Tenderer shall suffer execution to be issued, or shall suffer any payment under this contract to be attached by or on behalf of and of the creditors of the Tenderer, or shall assign, charge or encumber this contract or any payments due or which may become due to the Tenderer, there under, or shall neglect or fail to observe and perform all or any of the acts matters of things by this contract, to be observed and performed by the Tenderer within three clear days after the notice shall have been given to the Tenderer in manner hereinafter mentioned requiring the Tenderer to observe or perform the same or shall use improper materials or workmanship in carrying on the works, or shall in the opinion of the Indian Bank not exercise such due diligence and make such due progress as would enable the work to be completed within due time agreed upon, and shall fail to proceed to the satisfaction of the Indian Bank after three clear days notice requiring the Tenderer so to do shall have been given to the Tenderer as hereinafter mentioned, or shall abandon the contract, then and in any of the said cases, the Indian Bank may notwithstanding previous waiver determine the contract by a notice in writing to the effect as hereinafter mentioned, but without thereby effecting the powers of the Indian Bank of the obligations and liabilities of the Tenderer the whole on which shall continue in force as fully as if the Contract, had not been so determined and as if the works subsequently executed had been executed by or on behalf of the Tenderer (without thereby creating any trust in favour of the Tenderer) further the Indian Bank or his agent, or servants, may enter upon and take possession of the work and all plants, tools, scaffolding, sheds, machinery , steam and other power, utensils and materials lying upon premises or the adjoining lands or roads and sell the same as his own property or may employ the same by means of his own

servants and workmen in carrying on and completing the works or by employing any other Tenderers or other persons or person to complete the works, and the Tenderer shall not in any way interrupt or do any act, matter of thing to prevent or hinder such other Tenderers or other persons or person employed from completing and finishing or using the materials and plants for the works when the works shall be completed, or as soon thereafter as conveniently may be, the Indian Bank shall give notice in writing to the Tenderer to remove his surplus materials and plants and should the Tenderer fail to do so within a period of 14 days after receipt by him the Indian Bank may sell the same by Public Auction and shall give credit to the Tenderer for the amount so realized. Any expenses or losses incurred by the Indian Bank in get the works carried out by other Tenderers shall be adjusted against the amount payable to the Tenderer by way of selling his tools and plants or due on account of work carried out by the Tenderer prior to engaging other Tenderers or against the Security Deposit.

40. Force Majeure

- (a) Notwithstanding the provisions of Terms and Conditions of Contract (TCC), the successful bidder shall not be liable for forfeiture of his EMD / ISD / ASD, liquidated damages, or termination for default if and to the extent that the delay in performance or other failure to perform its obligations under the Contract, is the result of an event of Force Majeure.
- (b) For purposes of this clause, “Force Majeure” means an event beyond the control of the successful bidder and not involving the successful bidder’s fault or negligence and not foreseeable. Such events may include, but are not restricted to, acts of INDIAN BANK in its sovereign capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions, and freight embargoes.
- (c) If a Force Majeure situation arises, successful bidder shall promptly notify INDIAN BANK in writing of such condition and the cause thereof. Unless otherwise directed by INDIAN BANK in writing, the successful bidder shall continue to perform its obligations under the Contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event.

41. ARBITRATION

All disputes or differences of any kind whatsoever which shall at any time arise between the parties hereto touching or concerning the works or the execution or maintenance thereof of this contract or the rights touching or concerning the works or the execution of maintenance thereof of this contract or the construction remaining operation or effect thereof or to the rights or liabilities of the parties or arising out of or in relation thereto whether during or after determination foreclosure or branch of the contract (other than those in respect of which the decision of any person is by the contract expressed to be final and binding) shall after written notice by either party to the contract to the other of them and to the Indian Bank hereinafter mentioned be referred for adjudication to a sole Arbitrator to be appointed as hereinafter provided.

For the purpose of appointing the sole Arbitrator referred to above, the Indian Bank will send within thirty days of receipt of the notice, to the Tenderer a panel of three names of persons who shall be presently unconnected with the organization for which the work is executed.

The Tenderer shall on receipt of the names as aforesaid, select anyone of the persons name to be appointed as a sole Arbitrator and communicate his name to the Indian Bank within thirty days of receipt of the names. The Indian Bank shall there upon without any delay appoint the said person as the Sole Arbitrator. If the Tenderer fails to communicate such selection as provided above within the period specified, the competent Authority shall make the selection and appoint the selected person as the Sole Arbitrator.

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

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

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

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

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

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

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

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

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

The arbitration proceedings will not prejudice the right of approaching legal forum by the parties.

42. Liquidated Damages

- (a) Should the work be not completed to the satisfaction of the Bank /Consultants within the stipulated period, the contractor shall be bound to pay to the Bank a sum calculated as given below by way of liquidated damages and not as penalty during which the work remains uncompleted or unfinished after the expiry of the completion date.
- (b) The work should complete on time or as mentioned elsewhere. If the contractor fails to complete the job within the stipulated time, he will bear the cost of penalty With maximum rate @ 1% (One percent) per month of delay to be computed on per day basis based on quantum of damage suffered due to stated delay on part of Contractor. Provided always that the total amount of compensation for delay to be paid under this condition shall not exceed 10% (ten percent) of the accepted tendered value of work.

43. Limitation of Liability

- (i) For breach of any obligation mentioned in this agreement, subject to obligations mentioned in this clause, in no event successful bidder shall be liable for damages to Bank arising under or in connection with this agreement for an amount exceeding the value of this agreement. Successful bidder will ensure Bank / Consultant confidentiality and shall be responsible for liability arising in case of breach of any kind of security and/or leakage of confidential customer / Bank's related information to the extent of loss so caused.
 - (ii) The limitations set forth herein shall not apply with respect to:
 - a) claims that are the subject of indemnification pursuant to IPR infringement,
 - b) damage(s) occasioned by the gross negligence, fraud or willful misconduct of successful bidder,
 - c) damage(s) occasioned by successful bidder for breach of Confidentiality Obligations,
 - d) When a dispute is settled by the Court of Law in India.
 - e) Loss occasioned by Non-compliance of Statutory or Regulatory Guidelines.

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

Safety Measures

All people working shall be provided with safety helmets, safety shoes, goggles, gloves, Safety belts etc., which shall be worn by the workmen while performing work and people working at elevation more than 10 feet shall be always provided with safety belts at contractor's cost. The safety belts shall be properly fixed to a lifeline always while at work. The Contractor shall provide safe means of access to any working place including provisions of suitable and sufficient scaffolding at various stages during all operations of the work for the safety of his workmen. Contractor shall ensure deployment of appropriate equipment and appliances for adequate safety and health of the workmen and protection of surrounding areas.

The Contractor shall ensure that all their staff and workers including their sub-contractor (s) shall wear Safety Helmet and Safety Shoes. Contractor shall also ensure use of safety belt, Protective goggles, gloves etc. by the personnel as per job requirements.

Contractor shall ensure that a proper Safety Net System and shall be used at appropriate locations. The safety net shall be located not more than feet (9.0 meters) below the working surface at site to arrest or to reduce the consequences of a possible fall of persons working at different heights.

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

Personal Safety Equipments:

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

- a) Workers employed on mixing asphalt materials, cement and lime mortars shall be provided with protective footwear and protective goggles.
- b) Those engaged in white washing and mixing or stacking of cement bags or any material that is injurious to the eyes shall be provided with protective goggles.
- c) Those engaged in welding works shall be provided with welder's protective eyesight lids.
- d) The Tenderer shall not employ men below the age of 18 years and women on the work of painting with products containing lead or any toxic material in any form.

Wherever men above the age of 18 are employed on the work of precautions should be taken:

- i) Overalls shall be supplied by the Tenderer to the workers and adequate facilities shall be provided to enable the working painters to wash during the cessation of work.
- ii) When the work is done near any public where there is risk of necessary equipments should be provided and kept ready for use and all necessary steps take for prompt rescue of any person in danger and adequate provision should be made for prompt first aid treatment of all injuries likely to be sustained during the course of the work.

First Aid

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

Electricity & Water

The rate quoted by the contractor shall include all expenses that are required for providing all the water required for the work and the contractor shall make his own arrangements for the supply of good quality water suitable for construction and good quality drinking water for the workers. Contractors have to make his own arrangement for the water as directed by Local Authorities for the furnishing/ construction purpose.

The rate quoted in the tender shall include the expenses for obtaining and maintaining power connections and shall pay for the consumption charges. The Contractor shall make their own arrangements to draw the supply from source of Indian Bank (if available) and pay directly the actual consumption charges at mutually agreed rates between them. All the municipal charges for drainage and water connection for construction purposes shall be borne by the Contractor.

Before starting the work the contractor has to submit the BAR-CHART and it is to be approved by the Consultant.

The Contractor is directly responsible for any accident, injury, disableness and other such things that may happen to his workmen during working hours or outside working hours if they happen to be in the work site and that he will pay adequate compensation to such people. And the contractor has to take the full responsibility for these disabilities.

The Contractor will be responsible for any accident or unto ward incident that may happen to any person in the work site or near about due to inadequate safely measures, carelessness, negligence, incorrect procedures, inadequate supervision, improper methods, and that he will attend to all related police enquiry, court attendance and will bear the cost for all such expenses including compensation, if any, to be paid.

Scope of Work for contracting firm

STRUCTURAL REPAIRING, RETROFITTING, REVAMPING WORKS (CIVIL, INTERIOR, PLUMBING AND ELECTRICAL) AT 1,FAKIR PARA ROAD,BEHALA,SHIVAM RESIDENTIAL COMPLEX BUILDING

The scope of works to be executed by the contractors on award of work are as follows.

Major External Internal Structural Repairs, Civil Repairs, Repainting, Plumbing Waterproofing and allied works.

The time of completion is 6 months including monsoon from the 14th day of the date of handover of the site or issue of LOI, whichever is earlier.

The work shall be carried out as per the Instructions by the Consultant under their supervision.

Other Terms & Conditions:

1. The Applicant must obtain for himself/themselves on his/their own responsibility and at his/their own Expenses all the information that may be necessary for the purpose of filling of this application. Before submitting the tender & after pre- qualification applicant must scrutinize the details and inspect the site of work and acquaint himself/themselves with all local conditions & matter pertaining thereto.
2. Conditional Tenders will be rejected.
3. Joint ventures shall not be permitted.
4. Unless otherwise agreed or stipulated in this tender, INDIAN BANK are not concerned with any rise or fall in the prices of any materials or labour. The rates quoted shall include all costs, only GST shall be paid by Bank.
5. The tenderer should thoroughly study works, conditions of contract, relevant specifications and rates quoted should cover cost of executing the items as per the relevant specification
6. The tender shall remain valid for acceptance for a period of 120 days from date of opening of the Price-Bid;
7. Tender document in which tender is submitted by a tenderer shall become the property of INDIAN BANK and Bank shall have no obligation to return the same to the tenderer.
8. Tenderers not giving the full particulars as mentioned above or as called for in the special Conditions or not complying with any of the conditions set forth above or therein are liable to be summarily rejected.
9. For any clarification of technical details, you may contact Consultant --- **M/s- CONSULTING DEVELOPMANT SERVICES , Office – 17, KALI BARI LANE JADAVPUR KOLKATA700032 .Contact No:9831664630 / 9330870022 or Email: cds.ganguly@yahoo.com**
10. The INDIAN BANK reserves the right to select / reject any / all Bid application without assigning any reason thereof.
11. The list of responsibilities mentioned above is only indicative and the contractor will have to assume full responsibility for completion of the project both qualitatively and quantitatively as per accepted contract conditions in the best possible workman like manner in all respects till its handover within the agreed time schedule and cost by following laid down norms / procedure of CVC in an open and transparent manner to the satisfaction of the INDIAN BANK and towards achieving this goal whatever is required to be done will have to be arranged by the contractor with the approval of Bank.

Work Envisaged

1. The work shall involve Internal and External structural repair/ restoration /renovation work.
Structural repairs includes works in columns, slabs, beams etc., waterproofing work of terrace, toilets, water tanks, plumbing ducts, changing pipelines/sanitary, boundary walls, all civil work besides disposal of debris,

erecting scaffoldings, painting, plastering etc. including removal, re- fixing, repairs (if any while carrying out the civil work) of false ceilings, necessary repairs to electrical installations, and any other damages/work resulting from the civil work, common spaces development.

Structural repairing & retrofitting work shall be carried out as per Structural audit report and in consultation with Architectural consultant.

2. Use of latest technology /methods for all repair, restoration and renovation work, drainage and sewage systems, rain water harvesting, energy saving plants etc.
3. The Contractor shall submit a brief write up on the a) Technical Approach & Methodology, Explaining the understanding of the assignment and proposed methodology to carry out the assignment with emphasis on the expected problems and adoption of approach to solve them. b) A Work Plan containing details of main activities, duration of different activities and milestones to deliver the output consistent with the Technical Approach & Methodology. c) Organisation & Staffing: Should contain the details of the technical & supervisory team to be deployed on the job including their qualifications and domain experience. Also, a list to be submitted detailing the documents, reports etc. proposed to be delivered considering feasibility of the final output.

Work responsibility

1. Assuming full responsibility for supervision including day-to-day supervision, compliance and observance of all labour and safety regulations, checking and inspection of samples that will be used in the repair / restoration / renovation work, monitoring and compliance, quality control, co- ordination with INDIAN BANK and the contractors and reporting daily progress by posting sufficient number of qualified technical staff (preferably graduate in Civil Engineering having minimum 05 years' experience in similar type of works) as necessary to ensure proper and timely execution of the said works as per drawings and specifications.
2. Bio-data of technical staff shall be furnished to Indian Bank. Site Engineers shall be engaged full time during the progress of work on daily basis throughout the entire period of the Project for day- to-day supervision, ensuring smooth progress by prompt supply of drawings and giving proper directions and also co-ordination with all the agencies engaged in the design engineering and execution of various items of work as required. The technical staff will invariably report to the department every day and keep INDIAN BANK officers involved updated. The Architect shall have to coordinate his work with the works of all other trades.
3. INDIAN BANK reserves the right to judge the capability of supervising staff and advise for change in case not found suitable or delay in assigned work.
4. The measurements shall be generally recorded by the Site Engineer of the contractor and consultants in the presence of INDIAN BANK Official wherever necessary.
5. The Site Engineer of the contractor and the representative of Architectural Consultant shall take joint measurements of the work as it progresses and record them directly in the Measurement sheet.
6. The contractor shall quote the rate as per BOQ Specification. Refer technical specification for reference only.
7. It shall be ensured that the method of measurement is in accordance with IS: 1200. The precision in measurements shall be as laid down in IS-1200 and as per actual measurement at site. Any points of disagreement with the contractor pertaining to measurements shall be promptly referred to the decision of the Competent Authority/ Consultants.
8. Extra/deviated items, as claimed by the contractor, shall not be recorded in Measurement Book until they are approved by the Competent Authority/ Consultants.
9. In case some allegedly extra/deviated item is carried out by the contractor while complying with approved drawings and specifications and the same is to be covered up, the Site Engineer or Project Management Consultant shall check the item and its specification and record its measurements but simultaneously enter up the proviso that their admittance is subject to the approval by the Competent Authority. Both the measurements and the proviso shall be got signed by the contractor.
10. The measurement book shall not be handed over to the contractor at any time. The contractor or his representative may be permitted by the Site Engineer or Project Management Consultant to see it in his presence and /or make a (concurrent) copy of his own. The contractor shall, however, be warned that his copy shall be regarded as an unofficial copy of the Indian Bank's Measurement Book. This is the only authorized document in the matter.

The measurement shall be signed at the end of each session of measurement of the day's work, as the case may be, by both the parties (i.e. Measurer/Site Engineer and the contractor).

ARTICLES OF AGREEMENT

THIS AGREEMENT is made on this day of 2025 between Indian Bank having its Zonal Office atXXXXXXXXXX (hereinafter referred to as the "Employer") which expression shall include its successors, legal representatives and assigns of the one part.

AND M/s----- having its Registered office at..... and Regional Office atXXXXXXXXXX.

(hereinafter referred to as the "Contractor") which expression shall include its successors, legal representatives and assigns of the second part.

WHEREAS Employer intends to carryout STRUCTURAL REPAIRING, RETROFITTING, REVAMPING WORKS (CIVIL, INTERIOR, PLUMBING AND ELECTRICAL) AT 1,FAKIR PARA ROAD,BEHALA,SHIVAM RESIDENTIAL COMPLEX BUILDING at below mentioned Indian Bank own premises.

- Location 01: XXXXXXXXXXXX
XXXXXXXXXX
XXXXXXXXXX

WHEREAS the Employer has caused drawings and tender documents to be prepared by his Bank / Engineer-In-charge (hereinafter referred to as "Bank / Engineer-In-charge").

AND whereas the Employer has called for tenders for the above work as per Employer's NIT dated -----and whereas the tender dt. ----- submitted by the contractor has been accepted for such sum as may be ascertained to be payable in terms of the Bill of Quantities and which sum is estimated to be Rs.
..... (Rupees) hereinafter referred to as the said "Contract Sum".

AND whereas the Contractor has agreed to execute the work as per drawings, specifications, conditions of contract of the tender and work Order for the Employer's project".

AND whereas parties herein desirous of reducing the agreed terms into writing as under:

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS: -

- 1) In consideration of the said Contract Sum to be paid at the times and in the manner set forth in the said Conditions the Contractor shall carry out and complete all the Civil, electrical Works as per terms and conditions herein contained and according to the general conditions of the contract, notice inviting tender, special conditions of contract, general scope of work,technical specifications, schedule of rates and instructions to be given by Bank / Engineer-In-charge and to the entire satisfaction of the Employer.

2) Contract Price, Taxes and Payment Terms:

Total contract price is Rs..... which is inclusive of cost of materials, equipment, installation charges and tools and tackles required for execution of the job. Above price is **excluding GST** in respect of this contract. No claim in this respect will be entertained. Income tax on payments shall be levied as per prevailing rules and will be deducted and deposited by Employer in accordance with the law and the provisions of tax deductions at source under Income Tax Act 1961.

However, interim payment will be made as per the site measurements on Item Rate basis and certification of the Bank / Engineer-In-charge:

3) Completion Period:

Time is the essence of the Contract. The work is to be completed in all respects within **180days** from the date of receipt of the Work Order /letter of intent by the Contractor or handing over of site whichever is later. If the Contractor fails to complete the job within the agreed time period, the Contractor will have to bear liquidated damages as per the relevant clause mentioned in the Tender Documents.

4) Earnest Money:

The Contractor has deposited Demand Draft / Bank Guarantee for an amount of **Rs 3,14,280/-** as Earnest Money. In case of MSE empanelled firms, they are exempted from paying the EMD and tender cost, provided the registration with NSIC is valid and the name of activities/services/stores is related to the work called for.

5) Inspection of Site:

The Contractor has inspected the site before submitting his tender and has satisfied himself as to the nature of the work to be executed on the site. Any difficulties which the Contractor may come across in the course of the work shall in no way entitle the contractor to claim or receive extra payment unless the Employer is of the opinion that such difficulties could not have been foreseen and the Employer consents in writing. The site will be handed over to the contractor as per the terms of tender and in no case the contractor can claim for non-suitability of site condition for extension of time unless employer opinions the other way.

6) Supply of Material and Labour:

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

7) Defective Work / Materials:

If any part of the work done by the Contractor is found defective in workmanship or if bad or inferior materials have been used the Contractor shall at his own risk and cost demolish all such defective work and rebuild the same and / or replace the bad or inferior materials used within a time frame mentioned to the satisfaction of the 'Bank / Engineer-In-charge/ Employer'. The decision of the Employer / Bank / Engineer-In-charge in this regard shall be final and binding on the Contractor. In case of default of the contractor to remove the defective work and rebuild the same or replace bad or inferior materials as directed by the Employer, the Employer shall be entitled to employ anyone else to carry out the same at risk and cost of the Contractor and recover all expenses incurred in this regard from the contractor.

The contractor should not damage the existing water proofing done on the roof. They should discuss about the work they are going to carry out with bank engineer/ Bank / Engineer-In-charge before they take up the work. In case of any damage done to the water proofing and detect leakage due to the same, the contractor will be made responsible to rectify the same at their cost to the full satisfaction of the bank.

8) Inspection of Work:

During progress of the work the site engineer of the Employer and Engineer-In-charge/ Employer shall be entitled at all times to have access to and inspect the work. If the work is inspected by the any Government/ Bank's authorized persons, the contractor will fully co-operate and extend all help to meet the observations.

9) Supervision:

The Contractor shall provide one or more competent and technically qualified engineers duly and fully authorized to act on his behalf in all matters relating to the works to be carried out under or any other matter concerning this agreement and who shall at all times be present at the works while any work is in progress as per directions, explanations & instructions of Employer / Engineer-In-charge.

10) Compliance with Statutory Regulations & Work Rules:

The Contractor shall be responsible for complying with the applicable laws / bye laws / Regulations in force from time to time and shall have to bear all statutory liabilities to the workers / personnel engaged for the job. Nothing will be paid extra in this regard. If any amount is paid by the Employer in this regard the same amount shall be deducted from the Contractor's dues. The Contractor shall have to arrange insurance cover for the workers / personnel engaged by him for the job.

11) Determination of Contract:

In the event of Contractor failing to keep / adhere to agreed schedule of work, or in the event of the Contractor failing to comply with the provisions of this contract by default and / or negligence and / or suspension of work or in the event of Contractor failing to complete the work within the stipulated period, the Employer may terminate this Agreement forthwith and employ, at the Contractor's risk and cost, another contractor or sufficient number of workmen to complete the work.

12) Force Majeure:

In case any Force Majeure condition herein mentioned occurs and continues for a period exceeding 15 days the parties here to undertake to sit together and devise ways for expeditious and proper performance of the obligations of the parties under this order.

This clause will be operative only if the work is delayed by a) Acts of God

b) Earthquake or floods or similar natural calamities.

c) Serious loss or damage by fire or lightning.

13) Arbitration:

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

The Parties concerned shall designate an arbitrator on mutual consent/consensus. In the event of no consensus being arrived, an Arbitral Tribunal shall be constituted comprising three Arbitrators, each party appointing one arbitrator and a third arbitrator to be appointed by the two arbitrators so appointed by the parties. The venue of the arbitration shall be exclusively at Chennai and any award passed by arbitrator or the arbitral Tribunal shall be final, conclusive and binding upon the parties and shall be deemed to have been made between parties themselves. The parties to the dispute shall share equally the cost of arbitration as intimated by the arbitrator”.

Submitting to arbitration may be considered as an additional remedy and it does not preclude the Parties to seek redressal / other legal recourse.

14) Engineer-In-charge:

The term Bank / Engineer-In-charge in the said conditions shall mean Engineer-In-charge for the purpose of this Contract, such other person as shall be nominated for that purpose by the Employer, not being a person to whom the Contractor shall object for reasons considered to be sufficient by the Employer mentioned in the said Conditions provided always that no person subsequently appointed to be Bank / Engineer-In-charge under this Contract shall be entitled to disregard or overrule any provision, decision or approval or direction given or expressed by the Bank / Engineer-In-charge for the time being.

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

Witness Address

Employer

Witness Address

Contractor

15. Integrity Pact

This Contract will fall under the ambit of "Integrity Pact", as per Bank's / CVC norms. Integrity pact envisages an agreement between the prospective vendors/tenderers and the buyer, committing the persons/officials of both the sides, not to resort to any corrupt practices in any aspect/stage of the contract. Only those vendors / tenderers who commit themselves to such a pact with the buyer, would be considered competent to participate in the bidding process. In other words, entering into this Pact would be a preliminary qualification.

The essential ingredients of the Pact include:

- a. Promise on the part of the Principal (Indian Bank) not to seek or accept any benefit, which is not legally available.
- b. Principal to treat all tenderers with equity and reason.
- c. Promise on the part of the tenderers not to offer any benefit to the employees of the Principal not available legally.
- d. Tenderers not to enter into any undisclosed agreement or understanding with other tenderers with respect to prices, specifications, certification, subsidiary contracts etc.
- e. Tenderers not to pass any information provided by Principal as part of business relationship to others and not to commit any offence under Prevention of Corruption/ Indian Penal Code Act.
- f. Foreign tenderers to disclose the name and address of agents and representatives in India and Indian Tenderers to disclose their foreign principals.
- g. Tenderers to disclose the payments to be made by them to agents / brokers or any other intermediary.
- h. Tenderers to disclose any transgressions with any other company that may impinge on the anti- corruption principle.
- i. Integrity Pact, in respect of a particular contract, shall be operative from the date of Integrity Pact is signed by both the parties till the final completion of the contract. Any violation of the same would entail disqualification of the tenderers and exclusion from the future business dealings.
- j. As a part of implementation of Integrity Pact under CVC guidelines, Bank may appoint Independent External Monitor (IEM).

INTEGRITY PACT

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

And..... Hereinafter referred to as "The Tenderer / Contractor"

Preamble

The Bank intends to award, under laid down organizational procedures, contract/s for The Bank values full compliance with all relevant laws of the land, rules, regulations, economic use of resources and off airness / transparency in its relations with its Tenderers(s) and I or Contractor(s).

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

Section :1.- Commitments of the Bank

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

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

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

Section 2- Commitment of the Tenderer(s)/ Contractor(s)/ sub- Contractor (agencies)

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

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

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

The Tenderer(s)/ Contractor(s)/ Sub- Contractor(s) will not commit any offence under the relevant IPC/ PC Act: further, the Tenderer (s)/ Contractor(s)/ Sub- Contractor(s) will not use improperly, for purpose of

competition or personal gain, or pass on to others, any information or documents provided by the Bank as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.

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

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

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

Section3- Disqualification from tender process and exclusion from future contracts

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

Section 4- Compensation for Damages

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

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

Section 5- Previous Transgression

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

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

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

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

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

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

Section 6-Equal treatment of all Tenderers/ Contractor(s)/ Sub- Contractor(s)

The Tenderer(s)/ Contractor(s) to demand from all sub-Contractors a commitment in conformity with this Integrity Pact, and to submit it to the Bank before contract signing.

The Tenderer(s)/ Contractor (s) shall be responsible for any violation(s) of the principles laid down in this agreement/ Pact by any of its Sub- Contractors/ Sub-vendors.

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

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

SECTION 7-CRIMINAL CHARGES AGAINST VIOLATING TENDERER(S)/ CONTRACTOR(S) /SUBCONTRACTOR (S)

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

Section 8-Independent External Monitor/ Monitors

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

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

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

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

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

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

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

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

Section 9-Pact Duration

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

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

Section 10-Examination of Books of Accounts

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

Section 11- Other provisions

This agreement is subject to Indian Law, Place of performance and jurisdiction is the Zonal office Kolkata Central, Estate Cell, 14, India Exchange place, Kolkata-7000106

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

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

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

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

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

The parties hereby sign this Integrity Pact at.....on.....
 (For & On behalf
 of the Bank) (For & On behalf of Tenderer/Contractor)

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

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

Witness 1:
 (Name &Address)

Witness 1: (Name &Address)

Witness 2:
 (Name &Address)

Witness 2: (Name &Address)

Bank Guarantee No.

Date:

PERFORMANCE BANK GUARANTEE

Indian Bank, a body Corporate constituted under the Banking Companies Acquisition and transfer of undertaking Act, having its Zonal Office XXXXXXXXXXXX(hereinafter referred to as Indian Bank) have entered into Agreement/Contract/Order No.----- dt ----- (hereinafter called “the said Contract/ the said Order”) with M/s ----- [hereinafter called “the said Contractor/Supplier”] for the work of ----- at below mentioned location.

➤ Location 01: XXXXXXXXXXXX
XXXXXXXXXXXX
XXXXXXXXXXXX
XXXXXXXXXXXX

1. Whereas under the terms of the said Agreement/Contract/Order, the Contractor/Supplier is required to furnish a Performance Bank Guarantee for 5% of tendered value i.e Rs. -----/- (Rs. Amount in words) towards the due fulfilment of the terms and conditions during the agreed time period or extension thereof, and also satisfactory performance of the said equipment supplied to Indian Bank during warranty period as per the warranty terms stipulated in the Agreement / Order.
2. Accordingly, we -----(name & Address of the issuing Bank) (hereinafter referred to as “The Surety:”, which expression shall, unless repugnant to the context or meaning thereof, include all its successors, administrators, executors and permitted Assignees.) at the request of ----- (name & Address of the contractor) do hereby undertake to pay to Indian Bank an amount not exceeding Rs. -----/- (Rs. Amount in words) on the failure of Contractor/Supplier in performance of their obligations as per the terms and conditions of the Contract/Order including the satisfactory performance of the item during warranty period as per the warranty terms stipulated in the Agreement / Contract/Order.
3. The Surety do hereby unreservedly, irrevocably undertake to pay the amounts due and payable under this guarantee without any demur, merely on demand from Indian Bank within 10 days of such demand stating that the amount claimed is due by way of breach of terms and conditions of the Agreement/Contract/Order. Any such demand made on the bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs. -----/- (Rs. Amount in words) and We undertake to pay to Indian Bank a amount not exceeding Rs. -----/- (Rs. Amount in words) so demanded not

withstanding any dispute or disputes raised by the contractor/supplier of the equipment in any suit or proceeding pending before any Court or Tribunal relating thereto our liability under this guarantee being absolute and unequivocal.

The Surety further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said Contract/Order and that it shall continue to be enforceable till all the dues of Indian Bank under or by virtue of the said Contract/Order have been fully paid and its claims satisfied or discharged or till Indian Bank certifies that the terms and conditions of the said Agreement/Contract/Order have been fully and properly carried out by the said Contractor/supplier(s) and accordingly discharges this guarantee.

4. The Surety further agree with Indian Bank that Indian Bank shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said Agreement or to extend time of performance by the said contractor/Supplier of the equipment from time to time or to postpone for any time or from time to time any of the powers exercisable by Indian Bank against the said contractor/Supplier and to forbear or enforce any of the terms and conditions relating to the said Agreement/Contract/Order and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said Contractor/ Supplier or for any forbearance, act or omission on the part of Indian Bank or any indulgence by Indian Bank to the said Contractor/Supplier or by any such matter or thing whatsoever which under the law relating to sureties would, but for this provision, have effect of so relieving us.
5. The Surety lastly undertake not to revoke this guarantee during its currency except with the previous consent of Indian Bank in writing and agree that any change in the constitution of the said contractor/Supplier or the said Bank shall not discharge the Bank of its liability under this deed.

The validity of Bank Guarantee shall be up to DD/MM/YY

And such date shall cover the period of warranty of all the supplies and excludes the period of defect liability. The Bank Guarantee shall remain valid for the period up to which the contractor is obliged for due performance of the said Agreement/ Contract/Order including the warranty period.

6. This Bank Guarantee shall be governed by and constitute in accordance with Indian Law and shall be subject to exclusive Jurisdiction of Indian Courts.

All the claims under this guarantee must be presented to the bank.

7. Notwithstanding anything contained hereinbefore.

Our liability under this guarantee is restricted to Rs. -----/- (Rs. Amount in words). The guarantee is valid up to DD/MM/YY or extension thereof.

Unless a claim or demand made in writing is presented to us on or before DD/MM/YY, the date of expiry of this guarantee all your rights under this guarantee shall be lapsed and we shall be released and discharged from all liabilities there under.

In witness where of the Bank through its officials has set its hand and stamp on ---day of ----- and the year---
----- at -----.

SIGNED AND DELIVERED for and on behalf of

For and on behalf of above named Bank. (Banker's Name and Seal)
Branch Manager

(Banker's seal)

SEAL OF THE BANK

GENERAL SPECIFICATIONS

To be read in along with particular specifications and bill of quantities These specifications are for work to be done, item to be supplied and materials to be used in the works as shown and defined on the drawings and described herein, to the satisfaction of the Employer / Consultant.

A. GENERAL WORK

1. External Scaffolding:

- 1.1. Conventional scaffolding shall be of vertical members of steel/bamboos, spaced and filled by suitable horizontal members secured to each other firmly. This scaffolding shall be double, both connected and braced properly, and secured by connecting with the members of permanent structure, at regular intervals. No holes shall be permitted in external brickwork. Necessary platforms, railings and safety nets, safety belts, helmets, etc. shall be provided to ensure the safety of workers. To reduce the height of falling debris intermediate platforms on the scaffolding shall be erected. Access for labour and staff to the platform from the flats at the relevant levels will be given, if possible. Alternatively, adequate and safe lifting tackle for men and materials shall be provided by the tenderer at his own cost.
- 1.2. Stitched hessian shall be tied to the external face of the scaffolding/platforms in order to avoid lumps of broken concrete flying around and causing accidents. Fencing at ground level shall be erected to dissuade third persons entering the work area.
- 1.3. Any additional arrangement and/or any alterations/additions to the normal scheme of the scaffolding for overcoming obstructions in the plan and elevations of the building shall be thought of and provided for in the quoted rates.

2. Window Covering:

- 2.1. Windows/doors/openings shall be covered with plywood or tin sheets and properly secured to protect the shutters and glass panes from falling debris, and to keep the dust out.
- 2.2. Any equipment, furniture, fixtures, fittings etc., adjacent to the work area, should be either removed or adequately covered (as advised by the consultant) to avoid damage/breakage during the progress of work.

3. Propping & Shoring:

- 3.1. The guidelines outlined on sketches shall be followed.
- 3.2. Steel tube adjustable props are preferred. The sections of timber props, if used, shall be adequate to support the structure temporarily as directed by consultant.
- 3.3. Bracings, base plates and wedging etc. are an integral part of the system. Providing adequate bracings, base plates and wedges is obligatory to have been included in the scheme for propping and shoring.
- 3.4. The propping and shoring shall be kept and maintained in position till required as directed by the Consultant.

B. STRUCTURAL/CONCRETE REPAIRS

1. Preparatory Work:

Categories of damage to concrete. Generally, there will be four categories of defective concrete. The defects of design or construction are many times aggravated by corrosion of reinforcement and consequent damage to the concrete.

- 1.1. Category No. 1: Core concrete is sound, but the concrete cover is cracked, reinforcement is slightly rusted, but replacement of steel is not required.
- 1.2. Category No. 2 : Damage due to corrosion of reinforcement which itself is in tolerable state but core concrete is unsound due to inherent honeycombing, voids, cavitation, deterioration etc.
- 1.3. Category No. 3 : Damage where corrosion of reinforcement is severe, the core concrete is compact and sound, but the concrete cover is cracked or spalled and corroded reinforcement is required to be restored by additional reinforcement.
- 1.4. Category No. 4: Damage where corrosion of reinforcement is severe and core concrete is also unsound. Reinforcement is to be replenished by additional reinforcement.

2. Defining the damaged area:

- 2.1. The doubtful area shall be checked. Any loose plaster or cover coating shall be removed to expose the affected concrete surface.
- 2.2. In case the exposed concrete surface is found to be sound but the plaster having come off due to lack of bond, the area shall be demarcated for re-plastering only.
- 2.3. In case the exposed concrete is found to be damaged, then the damaged concrete shall be demarcated for repairs as described.

3. Chipping/Demolition/Breaking of RCC/Plaster/Brick OR any others :

- 3.1. All precautions shall be taken by providing guard rails, barricading and covers in the interest of the safety of passersby.
- 3.2. The debris shall be stacked as neatly as possible and carted away as soon as possible to the Municipal approved dumping area.

4. Surface preparation:

- 4.1. All loose, disintegrated and cracked concrete shall be removed carefully by chipping hammer and/or chisel to expose sound concrete and to expose the rusted reinforcement if any. The removal of concrete shall be extended at least 150 mm. beyond the rusted length of reinforcement. Care shall be taken to leave sound and compact concrete undisturbed and to ensure that any good bond between the embedded reinforcement and parent concrete is not broken.
- 4.2. All exposed sound concrete shall be chipped to roughen in order to receive the new treatment.
- 4.3. The peripheral edges of broken concrete shall be cut true and in rectilinear patterns. Re-entrant/angled corners shall be chamfered.
- 4.4. Plaster or coating, shall be removed to the extent of 100 mm. beyond the cut edges of the damaged concrete.
- 4.5. Any inherent honeycombing, voids, cavitation etc. shall be noted and marked for grouting.
- 4.6. All unwanted foreign materials shall be removed by wire brushing and washing with a water jet.
- 4.7. Any existing reinforcement reduced in size, beyond acceptable limits and certified as such by the consultant, shall be cut and removed.
- 4.8. The remaining reinforcement shall be cleaned thoroughly of all scales, rust and blemishes by light chipping and scrubbing with wire brush. An approved rust remover shall be used if so instructed by the consultant.

5. Reinforcement: Providing New Reinforcement {in case of category of damage to concrete Category: 3 & 4}:

- 5.1. Any dislodged but acceptable reinforcement shall be anchored by means of dowels secured in the parent concrete, locking the reinforcement in position as shown in detailing sketches and/or as directed by the consultant.
- 5.2. Where the existing reinforcement has rusted and wasted to an extent where it cannot be accepted, new reinforcement in the form of steel bars or welded mesh shall be provided as directed by the consultant.
- 5.3. The new reinforcement shall be clean and free from loose mill scales, dust, rust, paint, oils etc. which may affect bonding between bars and concrete.
- 5.4. The reinforcement is represented diagrammatically on drawings and sketches; the same is not necessarily shown in true projection. The reinforcement shall be assembled in accordance to clause no. 11 of IS: 456-1978.
- 5.5. The new reinforcement shall be fixed to parent concrete by means of dowels secured in parent concrete as shown on the sketches as or directed by the consultant.
- 5.6. Reinforcement shall not be bent after being embedded in concrete. Laps in reinforcement may be allowed only with the prior approval of the consultant. The lap length shall be as specified.
- 5.7. Reinforcement may be required to be welded to the existing reinforcement as directed. The welding shall be in accordance with the recommendations of relevant standards for welding of steel bars used in reinforced concrete constructions.
- 5.8. The gaps and contact between the exposed steel and parent concrete shall be caulked with a specified epoxy putty.
- 5.9. The reinforcement old and new shall then be coated with a specified protective coat.

6. Making Good the Broken Concrete by Polymer Modified Mortar

All areas so chipped shall be subjected to water cleaning and drying. No deleterious material shall be left on the chipped surfaces. It is essential that the loose and cracked concrete shall be properly removed. It is essential that concrete around the rebar, which shows corrosion shall be removed properly, and sufficiently to ensure proper cleaning of rust from the rebar.

In case the distressed concrete extends into the core of the section it is essential to seek the consultant's approval prior to removal of this concrete. It is essential also to design proper support system and prop the area prior to removal of concrete beyond 5 mm inside the core area.

6.1. BOND COAT:

6.1.1. The specific quality requirements as stipulated in STS 6 above for a common work of bonding needed in restoration shall be followed. All the test facilities are generally not available even in sophisticated laboratories in the country. Few manufactures do have such an in-house facility with them. The difficulty therefore lies in strict stipulations and their subsequent job-site compliance. Therefore reliability of the product quality is important. The coat of approved material shall be applied to all exposed surfaces of concrete at least 20 minutes prior to polymer modified mortar / treatment. The material to be used shall be non-acidic in nature. List of approved material is given in the document. Only those materials approved shall be allowed to be used unless equivalent permitted by PMC in case of non-availability. All chemicals used for Rust Inhibition, Bond coat, Polymer Modified Mortar shall be of same generic and same manufacturer to maintain homogeneity.

6.1.2. The items to be used shall comply with all requirements as specified in STS 6 and the material purchased shall be given in the consultants' custody in the original manufacturer's sealed manner. It shall always remain in the client's store & custody.

6.2. Execution

6.2.1. Preparation of concrete surface

Concrete surfaces to which bonding chemicals are to be applied shall be exposed; this parent concrete should be free of loose and unsound materials. Surfaces shall be prepared by mechanical abrasion or using sand blasting/ stiff wire brushing as instructed by engineer.

6.2.2. Inspection of concrete surface prior to bond coat application.

6.2.2.1. All concrete surfaces prior to applications of coating shall be thoroughly inspected and approved by the consultant.

6.2.2.2. Surfaces shall be free from any deleterious materials, such as oil, dust, dirt etc.

6.2.2.3. Adhesive mixes permitted for Epoxies only. Polymers come in ready to use packages.

6.2.2.4. Bonding components shall be mixed in a clean container free from harmful residue or foreign particles.

6.2.2.5. Epoxy components shall be thoroughly blended with a mechanical mixer to a uniform and homogeneous mixture. Small batches (up to 1 liter) however shall be allowed by manual mixing such as using spatulas, palette knives etc.

6.2.3. Coating application on concrete / shot Crete / mortar placement

6.2.3.1. Work of application of bonding coat shall not be allowed to be performed beyond 40C atmospheric temperatures. In case the temperature is above specified then it is essential that cooling of the surface shall be done by water application and then drying the surface of free water.

6.2.3.2. Bonding coat shall be applied to concrete surfaces by spray equipment. However, contractor may apply the coating by brush, subject to the permission of engineer.

6.2.3.3. Fresh plastic concrete as per suggested system of modification shall be applied while coat is still tacky. If Bond coat cures to extent of losing its tacks before plastic modified concrete is placed, the same shall be removed or slightly abraded and second coat of Bond coat applied.

6.2.3.4. Freshly placed plastic concrete shall be thoroughly consolidated to ensure full bonding of new concrete.

6.3. POLYMER MODIFIED MORTAR:

The material used shall be as per the comparison of the infra spectrometer graph of the product the contractor wishes to use with that of the recommended product. The decision of the consultant as regards to the generic and brand shall be final for this contract and the contractor shall use only the material so approved.

6.3.1. Mortar mixes

6.3.1.1. Mix polymer components in clean container free of harmful residue of foreign particles.

6.3.1.2. Temperature from preparation of polymer mortar to application should be between 0 to 40 degree centigrade, otherwise as recommended by manufacturer.

6.3.1.3. Thoroughly blend polymer with a mechanical mixer to uniform and homogeneous mixture if the polymer is more than one month old.

6.3.1.4. The proportion of mixing the polymer for modification shall be decided by the use of the modified mortar.

For use in cover replacement the percent of polymer can be limited to 15 percent. However, for core replacement or in case of sections where distress is due to over stressing 20% modification is required.

6.3.1.5. Polymer Modified Mortar application. Modified mortar shall be prepared by first mixing all dry components in dry state mix required quantity of polymer with equal volume of water mixture. Mix the dry system and polymer and water mixture. Mix thoroughly by workable mix. For 1 bag of cement 7.5 Kg of polymer shall be used and the mortar shall be used 1: 3 volumetric mix.

6.3.1.5.1. Apply polymer modified mortar to concrete surface by hand packing and then sanding machine.

Thickness shall be within the limits recommended by the manufacturer. Additional layers shall be applied to bring the surface to line and level as required.

6.3.1.5.2. Work polymer modified mortar into place and consolidate thoroughly so that all contact surfaces are wet by the mortar and entrained air is reduced to the level recommended by manufacturer.

6.3.1.5.3. Finish surface of polymer modified mortar to texture, Colour, and smoothness required for the specific application. This mortar coat should be finished by application of plain cement mortar in 1: 3 using 53-grade cement. No water curing shall be applied to polymer modified mortar surface. However, over coat of plain cement mortar shall be cured with water as required after 12 Hrs.

6.3.1.5.4. Upon completion of finishing operations, allow mortar to cure in accordance with normal curing practices for polymer modified mortars.

6.3.2. Curing

6.3.2.1. All polymer treated surfaces can either be immediately covered with plain cement mortar, then cured after 12 hours or the surfaces can be left to naturally cure without sprinkling water for two days and then covered with second coat of plaster.

6.3.2.2. All plastered surfaces shall be water cured for seven days with the first two days the curing being done every five to six hours. When the atmospheric temperature of the site exceeds 40 degree Celsius then curing shall be resorted to as many times as required to keep the surface moist or to ensure the mortar temperature does not rise.

C. GROUTING AND SEALING:

1. Grouting for Surface Repair:

1.1.1. PRODUCTS.

1.1.1.1. All components used for grouting repair system are to be from one of the approved makes of polymers.

All components are to be of the same make. No components of different makes can be used in conjunction with each other.

1.1.1.2. The products shall only be from the approved list of companies.

1.1.1.3. Proper care is to be taken when using the material to maintain the required consistency and purity.

1.1.1.4. Only polymer latexes based on styrene butadiene (SBR) or acrylics can be used. The latex should have solid to a maximum of 45% and minimum of 35%. The physical, chemical and structural properties of the material used are to be submitted and specific approval to be sought for the material/system to be used.

1.1.2. SURFACE INSPECTION AND PREPARATION

1.1.2.1. All surfaces to be treated are to be exposed to the base level with removal of all claddings, plasters, facades, waterproof layers etc. The surface is to be examined for surface cracks, crevices, spalls and honey combing.

1.1.2.1.1. Concrete surface to which treatment is to be applied shall be freshly exposed parent concrete free of loose and unsound materials. Prepare surfaces by mechanical abrasion unless prohibited by environmental limitations in which case acid etching may be used.

1.1.2.1.2. Mechanical abrasion: - Use sandblasting or scarifying or water blasting or other approved means.

1.1.2.1.3. Acid etching: -Etch surface with a commercial grade (22 deg Baume) of hydrochloric acid diluted at a ratio of 10:90 to 20:80. After this application, scrub surface with a stiff bristled broom, brush, or similar implement. Immediately after foaming action of acid has subsided, flush surface with water jets until all residue is removed. Repeat procedure until laitance is completely removed. Wash such areas with water at least three times and allow to air dry prior to further treatment. This method of cleaning is to be used only in exceptional cases and under normal cases permission will not be given for use of this method.

1.1.2.2. Inspection of concrete surfaces prior to mortar application

1.1.2.2.1. Inspect all concrete surfaces prior to application of mortar to ensure that requirements of this Article are met.

1.1.2.2.2. Surfaces shall be free of any deleterious materials such as laitance, curing compounds, dust, dirt, and oil.

Materials resulting from surface preparation specified shall be removed.

All concrete surfaces shall be dry unless a water - insensitive coating is used. Surface temperature shall be at least 40F to permit wetting of concrete surface by polymer coating.

Evaluate moisture content for concrete by determining if moisture will collect at surfaces. This may be accomplished by taping a 4 x 4 ft polyethylene sheet to concrete surface. If moisture collects on underside of polyethylene sheet before polymer would cure, then allow concrete to dry sufficiently. Drying of the surfaces can be accomplished by either heating the surfaces by blowlamps or by use of sawdust, sand or any other means so that the surface is bone-dry.

1.1.3. Identification of method of grouting.

1.1.3.1. Locate the cracks by either surface inspection or by scrubbing the surface. In case the cracks are not visible to naked eye use compressed air to clear the crack marks. Having identified the cracks use light chisel or mechanical/ electrical saws to clear the crack upto the depth of the crack. In case widening of the crack is necessary to reach the depth of the crack it is advisable to do so at this juncture.

1.1.3.2. After clearing/ widening the crack use compressed air/ water jet to clean the opened crack surface. Ensure that the surface is dried in case water jet is used.

1.1.3.3. A method of grouting through three rows of grout nipple is to be adopted for all such cases. Insertion of the grout nipples are as per the specification .The section shall then be subjected to a series grouting as per specification. This grouting shall be adopted with a mix of proper consistency. Once the grouting is completed the top surface shall be cleaned and brought to level. The surface shall be then left for proper setting of the grout for about 48 hours.

1.1.3.4. Proper curing and safety precaution that form the integral part of the specification herein under referred shall be also followed in totality. The surface shall be ponded with water for ten days to test leakage.

2. Grouting for Distressed Concrete:

2.1. PRODUCTS.

2.1.1. All components used for grouting repair system are to be from one of the approved makes of polymers. All components are to be of the same make.No components of different makes can be used in conjunction with each other.

2.1.2. The products shall only be from the approved list of companies.

2.1.3. Proper care is to be taken when using the material to maintain the required consistency and purity.

2.1.4. Only polymer latexes based on styrene butadiene (SBR), acrylics, or epoxies can be used. The latex should have solid to a maximum of 50% and minimum of 40%. The physical, chemical and structural properties of the material used are to be submitted and specific approval to be seeked for the material/system to be used.

2.2. Surface inspection and preparation

2.2.1. All surfaces to be treated are to be exposed to the base level with removal of all claddings, plasters, facades, waterproof layers etc. The surface is to be examined for surface cracks, crevices, spalls and honey combing.

2.2.1.1. Concrete surface to which treatment is to be applied shall be freshly exposed parent concrete free of loose and unsound materials. Prepare surfaces by mechanical abrasion unless prohibited by environmental limitations in which case acid etching may be used.

2.2.1.2. Mechanical abrasion: - Use sandblasting or scarifying or water blasting or other approved means.

2.2.1.3. Acid etching: - Etch surface with a commercial grade (22 deg Baume) of hydrochloric acid diluted at a ratio of 10:90 to 20:80. After this application, scrub surface with a stiff bristled broom, brush, or similar implement. Immediately after foaming action of acid has subsided, flush surface with water jets until all residue is removed. Repeat procedure until laitance is completely removed. Wash such areas with water at least three times and allow to air dry prior to further treatment. This method of cleaning is to be used only in exceptional cases and under normal

cases permission will not be given for use of this method.

2.2.2. INSPECTION OF CONCRETE SURFACES PRIOR TO MORTAR APPLICATION

2.2.2.1. Inspect all concrete surfaces prior to application of mortar to ensure that requirements of this Article are met.

2.2.2.2. Surfaces shall be free of any deleterious materials such as laitance, curing compounds, dust, dirt, and oil.

Materials resulting from surface preparation specified shall be removed.

2.2.2.3. All concrete surfaces shall be dry as defined below unless a water - insensitive coating is used. Surface temperature shall be at least 40F to permit wetting of concrete surface by polymer coating.

2.2.2.4. Evaluate moisture content for concrete by determining if moisture will collect at surfaces. This may be accomplished by taping a 4 x 4 ft polyethylene sheet to concrete surface. If moisture collects on underside of polyethylene sheet before polymer would cure, then allow concrete to dry sufficiently. Drying of the surfaces can be accomplished by either heating the surfaces by blowlamps or by use of sawdust, sand or any other means so that the surface is bone-dry.

2.3. Identification of Method of Grouting.

2.3.1. FOR ALL SURFACES HAVING CRACKS/ CREVICES

2.3.1.1. Locate the cracks by either surface inspection or by scrubbing the surface. In case the cracks are not visible to naked eye use compressed air to clear the crack marks. Having identified the cracks use light chisel or mechanical/ electrical saws to clear the crack up to the depth of the crack. In case widening of the crack is necessary to reach the depth of the crack it is advisable to do so at this juncture.

2.3.1.2. After clearing/ widening the crack use compressed air/ water jet to clean the opened crack surface. Ensure that the surface is dried in case water jet is used.

2.3.1.3. A method of grouting through three rows of grout nipple is to be adopted for all such cases

3. GROUTING FOR HONEY COMBED SURFACES:

3.1. For surface which exhibits honeycombed concrete, the surface has to maintain in its dry state and a method of grouting through triangular grout nipples is to be adopted.

3.2. The opposite side to the grouting surface has to be sealed for flowing grout by either impervious cement plaster or by use of proper sealant as specified in the material to be used for grouting.

3.3. SIZE AND SPACING OF NIPPLES.

3.3.1. To determine the size of nipples, use a standard caliper or a metric scale and measure the width of the opened crack. The size of the nipple to be fixed within the crack has got to be minimum half the surface width of the crack measured above but should not exceed 15 mm in dia.

3.3.2. The nipples to be used should be of metal with one end tapered and thickness should be sufficient to withstand 5 m head of water. The spacing for the crack depends inversely to the width of the crack and will not exceed more than 300mm c/c and will not be less than 125mm c/c. The number of nipples along the crack will always be 1 less than two rows of nipples that needs to be fixed parallel to the crack at the same distance as the nipples spacing in the crack so as to form equilateral triangle with the apexes in the crack.

3.4. SEQUENCE OF GROUTING

For all horizontal surface grouting simultaneous grouting through of manifold pipe system is recommended. The grout pressure required to be given should be min X' for X'' of slab. For grouting vertical surface bottom most row of nipples is to be grouted simultaneously.

3.4.1. When a row or a nipple is grouted and no more grout passes through that nipple/row of nipple then that nipple/ row of nipple is to be cut and sealed.

3.4.2. After the grout in the first nipple/ row of nipple cures then subsequent row is to be treated. This process shall be continued till all the nipples/ row of nipples are grouted.

3.4.3. All the nipple /rows of nipple on that surface has to be treated before any change of direction is to be adopted. In case of change of direction, the same sequence has to be adopted.

3.5. FIXING OF GROUT NIPPLES.

All nipples are to be fixed in oversize drill hole extending to min. half of slab thickness but not exceeding 2/3 of slab thickness. They should be as erect as possible and drilled holes are to be properly sealed using proper sealants (impermeable). All surface cracks are also be sealed similarly. This operation to be completed min. 24 hrs. Prior to grouting operation. While using sealants epoxy based system or latex based are to be used. However,

combination of two will not be permitted. After the grouting operation is over remove all pipes, manifolds installed and cut all the nipples, flush to the slab base and seal them with the same sealant used for sealing the crack. In case of exposed R.C. walls and slab surfaces cover them with appropriate quality of plaster and slurry finish the surface for smoothness. Plastering and cement slurry is to be measured and paid separately under appropriate heads in bill of quantity. (Grouting to be adopted for one surface only.)

3.6. MATERIAL FOR GROUTING

Latex based polymer modified cement slurry is to be used for grouting. The ratio to be used shall be 20 kg of chemical to every bag of cement. The slurry has to be kept in its slurry form by timely stirring by manual or mechanical means at regular intervals during the process of grouting. Once the operation starts grouting should not be stopped unless the grout oozes out of the adjoining nipple or level of grout in the container does not change over a period of not more than 30 minutes.

All materials shall be supplied in sealed containers with labels legible and intact.

Contractor shall arrange to store all materials at temperatures between 5 to 30 deg. Celsius unless otherwise recommended by manufacturer.

All materials shall be handled in a safe manner and in a way to avoid breaking container seals.

Contractor shall comply with manufacturer's recommendations as to environmental conditions under which the material can be used/ applied.

4. POLYMER & GROUT TECHNIQUE OF WATER PROOFING:

The following specifications need to be followed to be able to achieve the desired result of treating a porous slab section and also creating a separate water proofing layer.

4.1. Pre-Treatment.:

- 4.1.1. Top Surface: All the wearing coats and water proofing layer existing on the present slab should be removed and the surface properly cleaned. The original slab surface shall be properly cleaned with a water jet prior to application of any treatment. In case of the surface having carbonation or corrosion related distress, this has to be treated first without the final coat of cover built-up being done.
- 4.1.2. Bottom Surface: The plastered surface has to be cleaned and removed. The surface cleaned properly and the surface cracks are to be opened. In case of the surface having carbonation or corrosion related distress, this has to be treated first without the final coat of cover built-up being done. The cracks which are of micro and minor nature (less than 10mm thick) shall be kept open.
- 4.1.3. Pre grouting: Pre grouting shall be adopted to clean the section of any deleterious material. The mix to be used for this grouting shall be very lean and with maximum viscosity and maximum set time. This grouting is to be adopted to clean the section and once grout starts to flow from the bottom surface. All other specification of nipple placement and depth of fixation shall be as per detailed specification.
- 4.1.4. Bottom surface Sealing: Once the pre-grouting is completed all cracks and crevices that are visible shall be filled with a proper crack filling sealant of approved make. The surface shall then be properly plastered with a polymer modified mortar as per specification TS 10 and brought to proper shape and size. Any other treatment preceding this step shall be taken after about four days of curing.
- 4.2. Grouting: The section shall then be subjected to a series grouting as per specification. This grouting shall be adopted with a mix of proper consistency. Once the grouting is completed the top surface shall be cleaned and brought to level. The surface shall be then left for proper setting of the grout for about 48 hours.
- 4.3. Surface Water proofing treatment. The top surface shall be treated for a two coat chemical water proofing treatment. The treatment shall be preceded by placing proper wearing coat/ layer of a material as may be essential for the usage of the slab. All wearing coat shall be placed on the top of water proofing layer in a proper manner so as not to puncture or pierce the WPL. Proper anti- skid layer shall also be adopted on the wearing coat.
- 4.4. Curing: Proper curing and safety precaution that form the integral part of the specification shall be also followed in totality.

D. WATERPROOFING:

1. Waterproofing Of Terraces:

Waterproofing of terraces is carried out as described below and in the same sequence:

- 1.1. Break and remove old waterproofing treatment from terrace slab.
- 1.2. Remove the plaster from the parapet walls etc. upto at least 300 mm. height from the slab top level.
- 1.3. Thoroughly chip and roughen exposed concrete. Rake out the joints of brickwork. Clean with wire brushes and wash thoroughly with plenty of water.
- 1.4. Any loose patches in base concrete shall be first repaired. If any steel is exposed, clean it and apply a protective coating. If any cracks are seen, open and seal them as directed by the consultant.
- 1.5. Cut in a form of "V" the junctions between walls and floor. Fix small pieces of brickbats along with 20 mm (3/4") metal for coving of Watta (rounding) at the bottom of parapet wall.
- 1.6. Add one bag of cement in hundred liters of water. Stir the mixture to get consistent cement slurry. Spread this slurry on terrace and allow it to penetrate uniformly over the cleaned surface. Use well burnt brickbats for terrace waterproofing.
- 1.7. Fix (line dori) in a slope 1:125 starting from the lowest point from rainwater down take and by keeping 65 mm (2.5") minimum thickness below rainwater outlet.
- 1.8. Fix brickbats in cement mortar layer of 1:6 proportion in a slope of 1:125 with waterproofing compound. Fill the cement mortar 1:4 with waterproofing compound in brickbat joints. Block rainwater outlet with gunny bag to avoid entry of cement slurry into it.
- 1.9. Cure the brickbat coba coat for at least seven days.
- 1.10. Lime mortar made from lime and fine sand in proportion of 1:5 is spread uniformly on the surface of 20 mm to 25 mm uniformly. This bed is left to harden for one day.
- 1.11. The design pattern if any is to be marked over this bed with the use of cotton line string. A splash of water is sprinkled lightly on this bed and very little dry cement is spread for work area of next 15 minutes. Then pieces of china mosaic are pressed and filled in position. The joints between these two pieces shouldn't exceed more than 3 to 4 mm. These pieces are hammered with wooden mallet to achieve uniform surface. Make the projected edge (kani) between the parapet plaster and the watta on second day.
- 1.12. The surface is cleaned with saw dust to remove excess cement sticking to the glazed china mosaic surface. If surface is not cleaned thoroughly by this method then the same shall be cleaned with dilute acid after one month, as directed by the consultants.
- 1.13. Completed work is then cured for 15 days by ponding method.

2. Waterproofing of Chajjas/Balcony/Tank Top :

- 2.1. Clean the top of the Chajja and chisel extra mortar if any.
- 2.2. Apply thick cement slurry over the top of chajja.
- 2.3. Apply 1:1½:3 metal screen or brickbat coat.
- 2.4. Making rounding of 6"radius on the wall (watta) at the junction of chajja and wall of the building.
- 2.5. Cure this coat for seven days.
- 2.6. Apply finishing coat with C.M. 1:4 with waterproofing compound.
- 2.7. Provide drip mould at the bottom edge of chajja alongwith finishing coat.
- 2.8. Apply cement slurry with water-proofing compound for smooth finish (ghotai). Polish with metal float and make impression by 2mm diameter cotton line dori for avoiding cracking.
- 2.9. Cure the water-proofing for at least seven days with soaked gunny bags.

3. Waterproofing Of Toilet Block :

- 3.1. Waterproofing of toilet is carried out as described below and in the same sequence.
- 3.2. Break and remove old waterproofing treatment from toilet slab.
- 3.3. Remove the plaster from the side walls etc. upto atleast 300 mm. height from the slab top level.
- 3.4. Thoroughly chip and roughen exposed concrete. Rake out the joints of brickwork. Clean with wire brushes and wash thoroughly with plenty of water.
- 3.5. Any loose patches in base concrete shall be first repaired. If any steel is exposed, clean it and apply a protective coating. If any cracks are seen, open and seal them as directed by the consultant.

- 3.6. Cut in a form of “V” the junctions between walls and floor. Fix small pieces of brickbats along with 20 mm (3/4”) metal for coving of watta (rounding) at the bottom of wall.
- 3.7. Add one bag of cement in hundred liters of water. Stir the mixture to get consistent cement slurry. Spread this slurry on slab and allow it to penetrate uniformly over the cleaned surface. Use well burnt brickbats for toilet waterproofing.
- 3.8. Fix (line dori) in a slope 1:125 starting from the lowest point from nahni trap.
- 3.9. Fix brickbats in cement mortar layer of 1:6 proportion in a slope of 1:125 with waterproofing compound. Fill the cement mortar 1:4 with waterproofing compound in brickbat joints. Block the nahni trap with gunny bag to avoid entry of cement slurry into it.
- 3.10. Cure the brickbat coba coat for atleast seven days.
- 3.11. Spread cement mortar in 1:4 proportion along with waterproofing compound over brickbat coba. Press the cement mortar by 2 meter long ruler. Level the surface by wooden float by keeping 25mm (1”) thickness. The finishing coat is made rough to receive the flooring tiles.
- 3.12. Completed work is then cured for atleast 07 days by ponding method.

E. PLASTERING WORK:

1. External Plaster:

- 1.1. The external plaster shall be applied in two coats and finished sand-faced.
- 1.2. All the precautions such as covering windows by plywood/tin sheets and tying stitched Hessian to external face of the scaffolding shall be taken. The debris shall be taken down and stacked or carted away as directed.
- 1.3. If the existing plaster is defective, the loose and damaged plaster shall be broken and removed carefully by chipping or by light chiseling, so as not to disturb the sound concrete/brickwork inside.
- 1.4. If the plaster is to be applied on unrepaired concrete surface the exposed concrete surface shall be first roughened by close chipping, and then cleaned with brushing and washing. If roughening of concrete is not possible, then a bond coat such as hack aid plast or equivalent at the interface shall be provided.
- 1.5. If the plaster is to be applied on repaired concrete surface, the base shall be kept rough to provide a key to the plaster.
- 1.6. If brickwork is to be plastered, the joints shall be raked out atleast 8 mm. deep and cleaned.
- 1.7. The surface to be plastered shall be cleaned of loose materials, is thoroughly watered and kept adequately wet during plastering.
- 1.8. If plaster is done in patches, the bond coat must also be applied on the edges of old plaster in contact with new plaster.
- 1.9. The external plaster shall be applied in two coats: -
 - 1.9.1. The first coat is mortar in cement: sand 1:4 proportions, with a water cement ratio not exceeding 0.45. The surface shall be even and without any undulations so as to have a thin second coat. The first coat is made rough to provide a key to the second coat. The base plaster shall be thoroughly watered and cured for minimum two days before the second coat is applied. If second coat is not to be done immediately, then minimum seven days curing must be done.
 - 1.9.2. The second coat shall be a thin layer of mortar with cement: sand 1:3, using, fine washed sand and the approved additive, applied evenly by a trowel and finished to required granular texture by a rubber sponge. The final line, level and plane shall match the existing unbroken plaster. The second coat shall be kept wet by watering and shall not be allowed to dry for at least seven days.

2. Internal Cement Plaster / Ready Mix Plaster With POP/PUTTY Finish

The cement mortar used shall be in proportion 1:4 unless otherwise specified. One part of Portland cement shall be dry mixed with four parts of sand, sufficient water shall then be added to make a homogeneous mixture. Mortar usable within 1/2 hour only should be prepared at a time. Joints in brick and stone masonry shall be raked out to receive the plaster and concert surfaces shall be hacked and washed well before plastering. The brick work shall be kept wet for at least six hours before plastering. A first coat of plaster of requisite thickness shall be applied and shall be finished with a coat of plaster of Paris of OR White Putty not less than 4mm thick. This is used only as a finishing coat. Line and level of the surface shall be done in plaster.

3. Separation Joint Filling with Chicken mesh 22 SWG:

- 3.1. Materials: Chicken wire mesh shall be 22 gauge of approved manufacturers, unless specified.

- 3.2. Fixing: The chicken wire mesh shall be provided at the junction of RCC and masonry work 150mm overlap on either side fixed with 'U' nails. 150mm center to center before plastering the junction.
- 3.3. Measurement: Length and breadth shall be measured correct to a centimeter (cm) and its area shall be calculated in Square meters (Sq.Mt.) correct to two place of decimal.

F. PLUMBING AND SANITARY WORK

1. Stone Ware Pipes:

- 1.1. Drain shall be laid in straight lines and to even gradient as shown on the drawings. Adequate care shall be exercised in setting out and determining the levels of the pipes and the Contractor shall provide substitute instruments, templates and equipment necessary for the purpose.
- 1.2. The pipes before being laid shall be thoroughly cleaned specially the inside. Cracked or chipped pipes shall not be used on the work.
- 1.3. The pipe joints shall be caulked with tarred gasket in one length for each joint, and sufficiently long to entirely surround the spigot end of the pipes, the gasket to be driven as far as possible into the joint by means of a suitable instrument. The spigot shall be centered in the socket and after the joint has been thoroughly cleaned and moisturized the socket shall be filled with neat cement paste which shall be sprayed off to form a neat fillet round the pipe. Each pipe shall be properly boned in so that the invert is to a true and even gradient. Whenever practicable all main drains shall be commenced at the point of the outfall, the necessary junctions for the branch drains being inserted as the work proceeds until the mains are completed. The branch drains shall then be commenced at the point of the junction with main drains. The whole of the drain pipes shall be accurately laid and butted closely together at the joints. Any earth, cement or other material entering the pipe line while jointing shall be thoroughly cleaned out of the pipes as the work proceeds.
- 1.4. Concrete bedding for drains shall, unless otherwise specified be of C.C. 1:2:4, 150mm thick and of width specified benched half way upon both sides to the crown of the pipes.
- 1.5. After sufficient internal has been allowed for the joints to set and before filling the trench, the joints of the pipes and drains shall be proved watertight by filling the pipes with water to a level 2M above the top of the highest pipes in the length to be tested, closing the ends of the sections and maintaining this water level for a period of one hour. If the testing is to conform to regulations of the local authorities it shall be done accordingly to the satisfaction of the local Authorities.
- 1.6. All such testing shall be done wholly at the Contractor's expense inclusive of apparatus, provision of water etc. and the rate covers all the above works including C.C.C. bedding etc.

2. Solid Waste and Anti Syphonage Pipes :

All solid pipe shall be of PVC with spigot and socket joints with head on spigot end. The pipes shall be secured to the masonry as specified. Solid pipes shall not be less than 100mm internal dia.

Waste pipe to be of PVC/UPVC as specified; internal waste pipes should be connected to the inlet of sealed ventilated gully and external gully to the inlet of open gully or as specified. The joint of the gully shall be appropriate to the material. All waste pipes shall be tested to the Engineer's satisfaction with a 1.5M head of water.

Anti - Syphonage Pipes:

The traps on branch soil pipe shall be ventilated at a point not less than 75mm or not more than 30cm. from the highest point, may be of lead PVC or UPVC joints appropriate to those materials of dia., not less than 50 mm for W.C. and urinal. The size of main branch antisiphonage pipes serving a number of fittings shall be determined by the number connected thereto. The antisiphonage pipe may be connected to the main soil pipe above the level of the top most sanitary fitting or run upwards independently.

PVC/UPVC PIPES (SOLID WASTE):

PVC pipes shall conform to IS specification for high-density polyethylene pipes for drainage work. The pipes shall have smooth internal and external surfaces. Slight shallow longitudinal grooves or irregularities in the wall thickness shall be permissible provided that the wall thickness remains within the permissible limits PVC pipes shall be pressure ratings (working pressure) as indicated. The pipes shall carry Colour bands to indicate the class of pipes.

Class of pipes	Working pressure (Mpa)	Colour
class 1	0.2	Orange
class 2	0.25	Red
class 3	0.4	Blue
class 4	0.6	Green
class 5	1	Yellow

3. CPVC pipes (PORTABLE WATER): -

CPVC pipes shall conform to IS 4985 - 1981, Specification for CPVC pipes for potable water supply. The pipes shall be reasonably round. Internal and external surfaces of the pipes shall be smooth and clean, CPVC pipes shall be pressure ratings (working pressure) as 2 - 5, 4.5 and 10Kg / sq. cm. as indicated.

CPVC pipes of all sizes are packed in polyethylene packing rolls and both the ends of the packed roll are sealed with air bubble film cap in order to provide protection during handling and transportation. After packing, the whole bunch of pipes is tightened with polypropylene/ HOPE strapping. Each role is then marked with size/type of the pipe, lot number and quantity. The packed pipe rolls are stored in their respective racks in properly covered storage area. Apart from providing protection during handling and transportation, the packing rolls also protect the pipe from ultra violet rays.

INSTALLATION GUIDELINES:

1. Visually inspect pipe ends before making the joint. Use of a chamfering tool will help identify and crakes, as it will catch on to any crack.
2. Pipe may be cut quickly and efficiently by several methods. Wheel type plastic tubing cutters are preferred. Ratchet type cutter or fine tooth saw are another options. However, when using the ratchet cutter be certain to score the exterior wall by rotating the cutter blade in circular motion around the pipe. Do this before applying significant downward pressure to finalize the cut. This step leads to a square cut. In addition, make sure ratchet cutter blades are sharp. Cutting tubing as squarely as possible provides optimal bonding area within a joint.
3. Burrs and filings can prevent proper contact between the tube and fittings during the assembly, and should be removed from the outside and inside of the tube. A chamfering tool is preferred, but a pocket knife or file is also suitable for this purpose.
4. Use only CPVC cement jointing. Use CPVC cement, which is fully recommended by the manufacturer.
5. When using adhesive solution/solvent cement be certain of proper ventilation.
6. When making a join, apply a heavy, even coat of cement to the pipe end. Use the same applicator without additional cement to apply a thin coat inside the fitting socket. Too much cement can cause clogged waterways. Do not allow excess cement to puddle in the fitting and pipe assembly. This could result in a weakening of the pipe wall and possible pipe failure when the system is pressurized.
7. Rotate pipe one-quarter to one-half turn while inserting it into the fitting socket and remove the excess adhesive solution/solvent cement from the joint with clean rag.
8. When making a transition connection to metal threads, use a special transition fitting or CPVC male threaded adapter whenever possible. Do not over-torque plastic threaded connections. Hand tight plus one-half turn should be adequate.
9. Hang or strap CPVC systems loosely to allow for thermal expansion. Do not use metal straps with sharp edges that might damage the tubing.
10. CPVC stub outs for lavatories, closets and sinks are appropriate. However, on areas where there is a likelihood that movement or impact abuse will occur, metal pipe nipples may be a more appropriate stub-out material. Showerheads, tub spouts and outside still cocks are examples.

11. When connected to a gas water heater, CPVC tubing should not be located within 50 cm of the flue. For water heaters lacking reliable temperature control, this distance may be increased up to 1 m a metal nipple or flexible appliance connector should be utilized. This measure eliminates the potential for damage to plastic piping that might result from excessive radiant heat from the flue.

Solvent welded joints of PVC pipes:

This technique to be used in all type of PVC Pipes.

4. VENT PIPES:

The solid pipe above highest branch shall be continued upwards of full size above the roof, flat or sloping to such height as directed or as required by local regulations PVC cowl shall be provided at the top all pips so projected above the roof shall be properly secured with stays.

There shall be two vent pipes, one at the sewer trap chamber (and Inlet) and the other at the manhole at the head to the drain. From a point as near to the top of manhole as possible a 100mm or 150mm salt glazed stone ware drain shall be laid on concrete bedding and this shall be carried to the pint indicated on the drawing or as directed. The drain shall be brought to the surface of the ground with a suitable bend and jointed to a 100mm to 75mm pipe of specified Material & height. This pipe shall be provided with cowl at the top.

NOTE: All pipes shall be measured in R.M. of pipes laid and fixed complete and shall be paid for at rates set out in the priced schedule of quantities inclusive of all accessories.

5. GULLY TRAP AND CHAMBERS:

Gully traps shall be 150mm x 150mm glazed stone ware laid on 15cm. bed with cement plaster rubbed smooth. A full size shall be 300mm x 300mm or as specified. Cast iron frame and cover painted two coats hot tar shall be fixed securely on top. The rate includes all these works specified.

Sewer trap of approved make and size of slat glazed earthward shall be built into outfall manhole. The interceptor shall have cascade, clincher stopper with length of galvanized chain secured to a staple built into the wall the wall of the manhole joint below the cover.

6. PAINTS (PLUMBING LINES):

Acrylic Emulsion: All the surface to be painted shall be clean and dry. All dirt, dust, oil, grease etc. shall be removed from the surface to be painted. Loose paint shall be removed by sand paper. Primer shall be applied of approved manufacturer. All coats to be laid evenly and properly with brush, the work should not show any hair marks, drops of paint and shall be allowed to dry thoroughly before the next coat is applied.

Cement Paint: The surface to be painted shall be thoroughly cleaned and soaked in water. Afterwards cement paint shall be applied of approved shade and colour. After each coat the surface shall be wetted before the next coat is applied. The paint surface shall be cured by keeping it moist for seven days.

Bases	:	These shall be of best white lead, red lead, zinc white or oxide of iron of approved make.
Vehicles	:	The solid shall be double boiled linseed oil and shall appear, when filled in a phial, limpid pale and brilliant. It shall taste sweet, with very little odor and shall be of approved quality. Solvents shall be spirits or turpentine.
Pigments	:	These shall be of selected tinge and of approved make.
Mode of Measurement	:	The average perimeter for all PVC pipe shall considered as that of 4" PVC pipe. The average perimeter for all UPVC/CPVC pipe shall considered as that of 1" UPVC/CPVC pipe. Painting area for pipes will be measured in M ² (Area = Perimeter * Height)

G. PAINTING:

1. WHITE / COLOUR WASHING:

1.1. Materials:

1.1.1. The materials for pREPAIRING lime wash shall be freshly burnt fat lime of good quality free from unburnt stone or other foreign matter. Lime shall be of "C" type as mentioned in IS 712.

1.1.2. Lime shall be slaked on the spot, mixed and stirred thoroughly with sufficient quantity of water (about 4.5 litres per Kg. Of lime) to make a thin cream. This shall be allowed to stand for a period of 24 hours and then strained through a clean coarse cloth. Clean gum dissolved in hot water shall then be added in the proportion of 4 gm. of gum Arabic to one liter of lime cream to prevent lime wash coming off easily when rubbed.

1.1.3. Indigo (Neel) up to 3 gm per Kg of lime dissolved in water shall be added and stirred well. Water at 5 liters per Kg. of lime is then added to produce a milky solution.

1.1.4. Alternatively readymade whiting (ground white chalk) complying with IS 63 can be used. In this case whiting shall be dissolved in sufficient quality of warm water to form thin slurry, which shall then be screened through a clean

coarse cloth. 2 gm. Of gum and 0.4 gm. Of copper sulphate dissolved separately in hot water shall be added for every liter of the slurry, which shall then be diluted with water to the consistency of milk for use. Rice size may be allowed instead of gum.

1.1.5. Colour wash shall be lime wash as above to which a solution of water and lime fast pigment, boiled if directed, shall be gradually added and stirred until the required tinge is available.

2. PAINTING

All the water base and oil base paints such as distemper, cement paint, enamel paint, flat oil paint etc. shall be of approved manufacturers and shall conform to the respective IS Codes and Standards. Colour and Shade shall be as approved by the Engineer-In-Charge.

2.1. Supply

All paint materials shall be supplied to the Site in the manufacturer's sealed and branded containers. Any containers reaching site with broken seals are liable for instant rejection by the Engineer-In-Charge.

2.2. Storage

All paint materials shall be stored in cool dry conditions clear of other stores to the satisfaction of the Engineer-In-Charge.

2.3. Usage

The mixing of materials of different brands before or during application shall not be permitted.

Brushes, pails, kettles and other implements and tools used in painting or preparation of the work shall be clean and free from foreign matter.

The instructions of the manufacturer shall be followed regarding preparation of surface and application of priming and finishing coats. In any event the following engineering practices shall always be followed while carrying out work as specified in IS 2395 Part-I & Part-II.

- (a) No exterior or exposed painting shall be carried out under adverse weather conditions such as rains, extreme humidity, dust storms etc.,
- (b) The work shall preferably be carried out in shade to avoid blistering or wrinkling due to direct sunlight. (c) All surfaces to be painted shall be free of loose matter, efflorescence, dust etc. before application of each coat.
- (d) No paint shall be applied to works, which are internally or superficially damp.

2.4. Preparation of Surfaces General

All surfaces requiring paint shall be thoroughly cleaned of all dirt, dust, grease or oil before spotting or priming. Oil or grease film shall be washed off with an acid that is non-injurious to the surface or shop primers and rinsed off completely with plain or soapy water. Surfaces shall be dry unless dampening is required for a particular finished material.

Before starting the work, the Contractor shall obtain the approval of the Engineer-In-Charge regarding the soundness and readiness of the surface to be painted on.

2.5. Masonry, Concrete and Plastered Surfaces

Surface shall be free from all efflorescence, mildew, loose paint or other foreign and loose materials. Surface with mildew or efflorescence shall be treated as follows:

- All mildewed surfaces shall be treated with an approved fungicide such as ammoniacal wash consisting of 7 gm. of copper carbonate dissolved in 80 ml. Liquor ammonia and silica fluoride solution and allowed to dry thoroughly before paint is applied.

- All efflorescence shall be removed by scrubbing and affected surfaces shall be treated with a solution of muriatic acid in water (1:6 to 1:8) and washed fully with clean water and allowed to dry thoroughly.

Masonry cracks shall be cleaned out and patch filled with mortar similar to the original surfaces uniformly textured. Where this type of re-surfacing may lead to the finishing paint being different in shade from the original surface, the surfaced area shall be treated with minimum one coat of cement primer, which shall be continued to the surrounding area from a distance of 100mm.

The plastered surface shall be carefully rubbed smooth and thoroughly cleaned with clean fresh water.

2.6. Metal

All metal surfaces shall be absolutely clean, dry and free from wax, grease or dried soap films. Grease shall be removed by proprietary brands of approved solvent cleaner or other solutions or detergents. In addition, all steel and iron surfaces shall be free from dust, rust and scales. This shall be done by wire brushing and scraping. All galvanised surface shall be pre-treated with a compatible primer according to the manufacturer's direction. Any abrasion in ship coats shall be touched with the same quality of paint as the original coat. The cleaning and operation of priming paint at site shall be carried out after the erection of steelwork.

As required single or double scaffolding or ladder shall be used without damaging or scratching the surfaces to be painted.

2.7. Woodwork

Surfaces to be painted shall be thoroughly dry, clean and smooth, properly sand papered to a fresh surface. Resinous exudation and large knots shall be removed and replaced with filler (sound wood). Small knots that do not justify cutting and sap tracks shall be covered with minimum two coats of pure shellac coating applied thinly and extended 25 mm. Beyond the area.

Parts of timber to be enclosed shall always be primed unless already impregnated. When the priming is hard, all cracks, holes, open joints etc. shall be made good with hard stopping and rubbed down with fine abrasive paper.

Primer of joinery shall be applied only on site after the Engineer-In-Charge has approved the joinery.

2.8. Application

The method of application shall be as per the recommendations of the manufacturer, wherever relevant. Applications shall be by hand brushing, rolling or air spray. All priming undercoats shall be applied by brush only. Rollers and spray equipment shall not be used for the purpose.

All materials shall be evenly applied, shall be free of sags, runs crawls or other defects. All coats shall be of proper consistency. All primer and undercoats shall be tinted to approximate the colour of the finishing coats. Finished coats shall be of exact colour and shade as per approved samples and all finish shall be uniform in colour and texture. All parts of moulding and ornaments shall be left clean and true to finish.

All coats shall be thoroughly dry before being papered or before the succeeding coat is applied. Coats of paint as specified are intended to cover surfaces perfectly. In case the surface is not covered properly by applying the specifying number of coats, further coats shall be applied by the Contractor when so directed by the Engineer-In-Charge.

In case of selection of special shades and colour (not available in standard shades) the contractor shall mix different shades and prepare test panels of minimum size 1 metre square as per instructions of the Engineer- In-Charge and obtain his approval prior to application of finishing paints.

2.9. Equipment and Protection

All brushes used for the job shall be clean and in good condition.

Spray painting equipment shall be a type that will produce full, even coatings, shall be equipped with grease and water separators and kept properly clean and well maintained at all times. Sufficient drop cloths, shields and other protective equipment shall be used to prevent sprays or droppings from fouling surfaces not being painted. Empty containers, saturated rags and waste shall not be allowed to accumulate.

Any required ventilating or isolating measures for protecting his workmen and others from toxic or unhealthy conditions due to painting shall be provided by the Contractor.

3. PLASTIC EMULSION PAINT:

Materials, surface preparation, Application, Equipment and protection, cleaning etc. shall be as described under-Painting specifications. The plastic emulsion paints is not suitable for application on external, wood, and iron surface, which are liable to heavy condensation. These paints are to be used on internal surfaces except wooden and steel. Plastic emulsion paints as per IS: 5411 of approved brand and manufacture and of the required shade shall be used.

3.1. Application

The paint is mixed thoroughly adding about 50% water and then strained through a cloth. The paint is then applied on wall and allowed to dry thoroughly. A putty is prepared by mixing whiting and paint and is filled wherever necessary in holes depressions etc.

For the second coat only about 15 to 20% water is added.

(The correct quantity of water to be added shall be as per manufacturer's instructions)

The number of coats shall be two unless otherwise specified in the item. The paint will be applied in the usual manner with brush, spray, or roller. The paint dries by evaporation of the water content and as soon as the water has evaporated the film gets hard and the next coat can be applied. The time of drying varies from one hour on absorbent surfaces to 2 to 3 hours on non- absorbent surfaces.

4. OIL PAINT:

Materials, surface preparation, application, equipment & protection, cleaning etc. shall be as described under- Painting specifications.

4.1. Application

Unless otherwise specified, paint shall be applied with brushes. The contents of the drum and tins shall be well stirred before using and occasionally during the use to prevent sedimentation at the bottom.

4.2. Priming coat

The priming coat shall be made up of materials depending on the surfaces to be plastered and specified or recommended by the manufacturer.

The primer shall be ready mixed primer of approved brand and manufacture and shall be compatible with finished painting scheme.

Where primer for wood work is specified it shall be prepared as per manufacturers specifications. The wood work to be painted shall be dry and free from moisture. The surface shall be thoroughly cleaned. All unevenness surface shall be rubbed down smooth with sand paper and shall be well dusted. Appropriate filler material conforming to IS: 345 with same shade as paint shall be applied.

4.3. Finishing coat

Unless otherwise specified, the finishing shall be done in at least two coats of paint. The last coat shall give a flat, semi glossy or glossy finish as directed by the Engineer-In-Charge.

5. SYNTHETIC ENAMEL PAINT:

In regards to materials, surface preparation, application, equipment & protection, cleaning etc. shall be as described above. Synthetic enamel paint conforming to IS: 2932 shall be of approved brand and manufacture and of required shade.

5.1. Application Priming coat

Primary coat shall be of ordinary paint of shade to match with the top coat as recommended by the same manufacture. As top coat shall be used. Under coat shall be allowed to dry overnight. It shall be rubbed next day with the finest grade of wet abrasive paper to ensure smooth and even surface, free from brush marks and all loose particles brushed off.

5.2. Finishing coat

It shall be applied on properly primed surface. Subsequent coat shall not be applied till the previous coat is dry. The previous coat shall be lightly sand prepared for better adhesion of subsequent coats.

Top coats of synthetic enamel paint of desired shade shall be applied after the under coat is thoroughly dry. Additional finishing coats shall be applied if found necessary to ensure properly uniform glossy surface. Unless otherwise specified, the finishing shall be done in at least two coats of paint. The last coat shall give a flat, semi glossy or glossy finish as directed by the Engineer-In-Charge. If, however, the surface is not satisfactory additional coats as required shall be applied to get correct finish.

6. WATERPROOF CEMENT PAINT:

In regards to materials, surface preparation, application, equipment & protection, cleaning etc. shall be as described above. The cement paint shall be conforming to IS: 5410 of approved brand and manufacture and of required shade.

6.1. Application Priming coat

Cement primer coat is used as a base coat on wall finish. The cement primer is composed of a medium and pigments which are resistant to alkalis present in the cement in wall finish and provides a barrier for the protection of subsequent coats. Primer coat material shall be as per recommendation of finish coat material. Primer coat shall be preferably applied by brushing and not by spraying on the clean dry and smooth surface. The surface shall be finished as uniformly as possible leaving no brush marks. It shall be allowed to dry for at least 48 hours, before subsequent coat.

6.2. Finishing coat

The solution shall be applied on the clean and wetted surface with brushes or spraying machine. The solution shall be kept well stirred during the period of application. Cement paint shall be mixed with water in two stages and strictly as per manufacturer's instructions.

The surfaces shall be given one coat of paint. Care shall be taken so that the paint does not dry out too rapidly. After 4 to 6 hours, the water shall be sprinkled over the surface to assist curing and prevent cracking. After the first coat has dried (24 to 48 hours), the second coat shall be applied in a similar manner. The finished surface shall be kept moist by occasional sprinkling with water for seven days after painting.

Water proof cement paint shall not be applied on surfaces already treated with white wash, colour wash, distemper dry or oil bound, varnishes, paints etc.

SPECIAL CONDITIONS OF CONTRACT

1. DRAWINGS AND SPECIFICATIONS

The works shall be carried out to the entire satisfaction of the EMPLOYER and the Consultant, in accordance with the signed drawings and specifications and such further drawings and details as may be provided by the Consultant, and in accordance with such written instructions, directions and explanations as may from time to time be given by the Consultant, whose decision as to the sufficiency and quality of the work and materials shall be final and binding upon all parties. If the work shown on any such further drawings or work that may be necessary to comply with any such instructions directions or explanations, be in the opinion of the contractor extraction that comprised in or reasonably to be inferred from the contract he shall before proceedings with such work, give notice in writing to this effect to Consultant, and in the event of the Consultants/employer agree to the same in writing the contractor shall be entitled to an allowance in respect of such extra work as on authorized extra. If the Consultant and the contractor fail to agree as to whether or to there is an extra, then, if the Consultant decided that the contractor is to carry out the said work, the contractor shall do so, and the question whether or not there is any extra, and it so the amount thereof, shall failing agreement, be settled by Arbitration as hereinafter provided, but such references shall in no way delay the fulfillment of this contract.

No drawings shall be taken as in itself on order for variation unless, in addition to the Consultant's signature, it bears express words stating that is intended to be such an order or bears a remark 'VALID FOR EXECUTION'. No claim for payment for extra work shall be allowed unless the said work shall have been executed under the provisions of clause 6 or by the Authorities or directions in drawing of the Consultant as herein mentioned.

One complete set of the signed drawings and specification and scheduled of quantities shall be furnished by the Consultant to the Contractor. The Consultant shall furnish within such time, as he may consider reasonable, one copy of any additional drawing, which in his opinion, may be necessary for the execution of any part of work. Such copies shall be kept at the works, and the Consultant or his representatives shall, at all reasonable time have access to the same and shall be return to the Consultant by the contractor before the issue of the Final certificate.

2. INSPECTION OF DRAWINGS

Before filling in the tender, the contractor will have to check up all drawings and schedule of quantities, and will have to get an immediate clarification from the Consultant on any point that he feels is vague or uncertain. No claim of damages or compensation will be entertained on this account.

3. EXECUTION OF WORK (PRICES TO INCLUDE)

The whole of the work is described in the contract a (including the schedule of Quantities, the specifications and all drawing pertaining there to) and as advised by Employer / Consultant from time to time is to be carried out and completed in all its parts to the entire satisfaction of the Employer /Consultant. Any minor details of the work which may not have been definitely referred to in this contract, but which are usual in practice and essential to the work, are deemed to be include in this contract. Rates quoted in the Schedule shall be inclusive of all freights, taxes, such as octroi, sales tax, Royalties, duties, excise, turnover tax, sales tax on works contract, etc., as well as transportation, so as to execute the contractor as per the rules and regulations of Local Bodies, State Government and Government of India.

The rates quoted in the tender should include all charges for:

- (a) Labor, maintenance fixing, carrying, cleaning, making good, hauling, watering etc
- (b) Plant, machinery, scaffolding, framework, English ladders, ropes, nails, spikes, tools, materials and workmanship protection from weather, shuttering, temporary supports, platform and maintenance of the same.
- (c) Covering for the walling and other works during inclement weather or striking or whenever directed as necessary.

4. SITE SUPERVISION

The contractor shall appoint at his own cost competent and adequate number of qualified Engineers at site, for (1) joint measurements and preparations of bills, (2) for testing materials at site and outside laboratory, (3) for other general supervision. Their appointment may be consulted with Employer / Consultant. The site Engineers shall not be removed from the site without the written consent of the Employer / Consultant.

5. MATERIALS AND WORKMANSHIP

The contractor under this contract binds himself to use first class materials. Quality of workmanship shall be of the highest order befitting the nature of the project. All work not up to the standard shall be summarily rejected and the Contractor will be required to dismantle the defective work and redo the work at his own cost and risk. The decision of the employer regarding the quality/standard of workmanship shall be final and binding on the contractor.

6. DIMENSIONS

Figures, dimensions, are in all case to be accepted preferences to scaled sizes. Large- scale details take precedence over small-scale drawings. In case of discrepancy, the contractor is to ask for a clarification before proceeding with the work. Accordingly if any work is executed without prior clarification it is liable to be rejected and shall not be paid for.

7. PROGRAMME OF WORKS

Contractor shall have to prepare and submit the CPM/PERT/BAR chart charges for Consultant's approval immediately after issue of the work order and display the approved charts in the site office. He shall also make bar charts indicating individual items and during the progress of work he shall update the bar charts showing the proportionate progress of work every week. He shall strictly adhere to the programme of works as per CPM/PERT/BAR charts showing the proportionate progress of work.

7. PROCUREMENT OF MATERIALS

Contractor shall procure all the materials for the work from the open market. Time is the essence of the contract. Acceptance of the completion date by the contractor shall mean that he has taken into consideration the availability of all material of approved make and quality in sufficient quantities at site to enable him to complete the entire work in the stipulated period.

Contractor will get sample of all materials approved by the Employer / Consultant before placing order / purchase / procurement. They shall conform to I.S. codes and or tender specification as applicable.

For all materials the contractor shall quote for the best quality of the materials of best make / source or supply and it will be got approved by Employer / Consultant before procurement.

In case sufficient quantities of approved quality materials from approved source are not available in time, contractor may have to procure the same for neighboring area with longer leads as required and directed at no extra cost. The material will be, however as per relevant I.S code as and wherever applicable.

9. UNFIXED MATERIALS

When any materials intended for the works shall have been placed at site by the Contract, such material shall not be removed there from (except for the purposes of being used on the works) without the written authority of the Employer / Consultant and when the contractor shall have received payment in respect of any certificate in which the Consultant shall have stated that he has taken in to account to value of such unfixed materials on the works such material shall become the property of the Employer and the contractor shall be liable for any loss or damage to any such materials.

10. CUSTODY AND SECURITY OF MATERIALS

The contractors shall be responsible for the custody and security of all materials and equipment at site and he will provide full time watchman / watchmen to lock after his materials, stores, equipment, etc.

11. RATES

Contractor shall quote all the rates both in figures and in words and any alterations shall have to be initiated by the contractor. Rates quoted by the contractor for the same item in different schedules will be same and in case different rates are quoted, the lowest will be taken as correct and the schedule corrected accordingly. In case of discrepancy between figures and the words the rate quoted in words shall be taken as correct one. All quoted rates should be inclusive of sales tax on works contract. Rates quoted by the contractor shall hold good for all the work carried out to any height and depth as shown in detailed drawings and as required and directed by the Consultant.

Rates quoted by the contractor shall also hold good for any small work at any place at site.

12. PRICES FOR EXTRAS ETC., ASCERTAINMENT OF

Should it be found after the completion of the works from measurements taken (in accordance with the previous paragraph) that any of the quantities or amounts of the work thus ascertained are less or greater than the amounts specified for the works in the priced schedule of quantities and / or tender or that any variations, is made, the valuation of such quantities, amounts or variations, unless previously or otherwise agreed upon, shall be made accordance with the following rules

The net rates or prices in the original tender shall determine the valuation of the extra work, where extra work is of a similar character and executed under similar conditions the work priced therein.

The net prices the original tender shall determine the value of the item omitted, provided if omissions vary the conditions under which any remaining items of work are carried out, the prices for the same shall be valued under thereof

- (a) Where extra works are not of similar character and / or executed under similar conditions as aforesaid or where the omissions vary, the conditions under which any remaining items of work are carried out of it the amount of any omission or additions relative to the amount of the whole of the contract works or to be any part thereof shall be such that in the opinion of the Consultants the net rate or price contained in the priced schedule of quantities or tender or for any item of work involves loss or expenses beyond that reasonably contemplated by the contractor or is by reason of such omission or addition rendered unreasonable or inapplicable, the Consultant shall fix in consultation with the Employer such other rate or prices as in the circumstances he shall think reasonable and proper, which shall be final and binding on the contractor.

(b) Where extra work cannot be properly measured or valued, the contractor shall be allowed any work prices at the net rates stated in the tender or the priced schedule of quantities, or if not so stated, then in accordance with the local day work rates and wages for the district, provided that in either case vouchers Specifying the daily time (and if required by the Consultant, the workmen's name) and materials employed at or before the end of the week following that in which the work has been executed.

(c) The measurements and valuations in respect of the extra items of contract shall be completed within the 'period of final measurement' or within three months of the completion of the contract works as defined under clause no 17 (Certificate of Virtual Completion)

13. EXTRA ITEMS RATES

The work or extra items shall be started only after the approval of extra items rates by client / Consultant. Rates for additional or extra items of construction work, which can be derived from the contract item rates and are not covered in the contract, shall be calculated on the basis of actual cost plus 15 % for profit plus applicable service tax.

14. CONSULTANT'S DRAWINGS AND INSTRUCTIONS

A set of major drawings along with the contract documents shall be provided to the contractor. For any clarifications or further drawings are required by the contract, during or before the start of construction work, the Contractor shall inform the Consultants in writing to provide the same. Working details will be given to the contractor from time to time during the progress of work as and when required. In case of other drawing is required by the contractor he will give a minimum ten days' notice to the Employer / Consultant.

15. FAILURE BY CONTRACTOR COMPLY WITH CONSULTANT AND/OR EMPLOYER'S INSTRUCTIONS

If the contractor after receipt of written notice from the Consultant requiring compliance with such further drawings and / or Consultants instruction, fails within seven days to comply with the same, the Employer / Consultant may employ and pay other persons to execute any such work whatsoever as may be necessary to give effect thereto and all cost incurred in connection there with shall be recoverable from the contractors by the Employer on a Certificate by the Consultant as a debit or may be deducted by him from any money due or which become due to the Contractors.

16. INFORMATION TO BE SUPPLIED BY THE CONTRACTOR

The contractor shall furnish the Employer / Consultant the following:

- (a) Detailed industrial statistics regarding the labor employed by him etc.
- (b) The Power of Attorney, name and signature of his authorized representative who will be in
- (c) Charges for the execution of work.
- (d) List of technically qualified persons employed by him for the execution of this work. (e) The total quantity and quality of materials used for the works.
- (f) The list of plant and machinery employed for this work.

17. CONSULTANT'S DELAY IN PROGRESS

The Consultant may delay the progress of the works in case of rains or otherwise, without vitiating the contract and grant such extension of time with the approval of the employer for the completion of the contract as he may think proper and sufficient in consequences of such delay, and the contractor, shall not make any claim for compensation or damage in relation thereto.

18. CERTIFICATE AND PAYMENTS

The contractor shall be paid by the Employer from time to time, by installments under interim Certificates to be issued by the Consultant to the contractor on account of the works executed by the contractor when in the opinion of the Consultant, work to the approximate value, named in the Appendix as 'Value of work for interim Certificates' (or less at the reasonable discretion of the Employer / Consultant) has been executed in accordance with this contract, subject however, to a retention of the percentage of such value need in the Appendix hereto mentioned as 'retention percentage for interim Certificates' until the total amount retained shall reach the sum named in the appendix as Total Retention money after which time the installments shall be up to the full value of the work subsequently so executed in the interim Certificate, such amount as he may consider proper on account materials delivered upon the site by the Contractor for use in the work. And when the works have been virtually completed and the Consultant shall have

certified in writing that they have been completed, the contractor shall be paid in accordance with the Certificate issued by the Consultant the sum of money named in the Appendix after satisfying themselves as 'Installment after Virtual Completion' being a part of the said 'Total Retention Money'.

The Contractor shall be entitled to the payment of the final balance in accordance with the final Certificate to be issued in writing by the Consultant at the expiration of the period refer to as 'The Defect Liability Period' in the Appendix hereto, from the date of Virtual Completion or as soon as after the expiration of such period as the work shall have been finally completed and all defect made good according to the true intent and meaning hereof, whichever shall happen, provided always that the issue by the Consultant of any certificate during the progress of the works or after the completion shall not relieve the Contract from his liabilities in cases of fraud, dishonesty or fraudulent concealment relating to the works of materials or any matter dealt within the certificate, and in case of all defects and insufficiency in the works or materials which reasonable examination would have disclosed. No certificate of the Consultant shall of itself be conclusive evidence that any works and materials to which it relates are in accordance with the contract.

The Consultant shall have power to withhold any certificate if the works or any part thereof is not being carried out to his / employer satisfaction.

The Consultant may by any Certificate make any correction in any previous Certificate, which shall have been issued by him.

Payment upon the Consultant's Certificates shall be made within a period named in the Appendix as 'Period of honoring of Certificates' after such Certificates have been delivered to Employer.

19. DELAYED PAYMENTS

Any amounts payable by the Employer to the contractor in pursuance of any Certificate given by the Consultant hereunder shall, if not paid within the 'Period of honoring of Certificate' no interest paid by the Employer.

20. FORCE MAJEURE

Neither party shall be held responsible by the other for breach of any condition of this agreement attributable to any 'Act of God' Act of state, lockout of control or any other reason, beyond the control of the parties and any breach of clauses arising from much force majeure conditions as aforesaid shall not be regarded as a breach of the provision of this Agreement.

21. INCOME-TAX AND WORKS CONTRACT TAX

Income Tax, Works Contract Tax shall be deducted at source by the client from the contractor' interim and final bill payments as per Statutory Regulations.

22. SITE MEETINGS

A senior representative of the contractor shall attend weekly meetings at works site and in addition meetings as and when arranged by employer / Consultant to discuss the progress of the work and sort out problems, if any and ensure that the work is completed in the stipulated time.

23. ACTION WHERE THERE IS NO SPECIFICATION

In case of any class of work for which there is no specification mentioned, the same will be carried out in accordance with the Indian Standards Specifications subject to the approval of the Employer / Consultant.

24. REPORTING OF ACCIDENT TO

The contractor shall be responsible for the safety of persons employed by him on the works and shall reports serious accidents to any of them whenever and wherever occurring on the works to employer who shall make every arrangement to render all possible assistance. This shall be without prejudice to the responsibility of the contractor under the Insurance Clause of the general conditions. Contractor shall take all precaution detailed in the safety code attached separately.

25. TYPOGRAPHICAL CLERICAL ERRORS

The Employer / Consultant clarification regarding partially omitted particulars of typographical or Clericals errors shall be final and binding on the contractors.

26. WORK PERFORMED AT CONTRACTOR'S RISK

The contractor shall take all precautions necessary and shall be responsible for the safety of the work and shall maintain all lights, goods, signs, temporary passages or other protection necessary for the purpose.

All works shall be done by the contractor's risk and if any loss or damage shall result from fire or from others cause, the contractor shall promptly repair or replace such loss or damage free from all expenses to the employer.

The contractor shall be responsible for any loss or damage to materials, tools or other articles used held for use in connection with the work. The work shall be carried on to completion without interferences with the operations of existing machinery or equipment, if any.

27. Proper Site Management Strategies shall be adopted on the site to prevent air pollution viz.

- a. Water shall be sprayed to prevent dust pollution on: -
 - i. Any dusty materials before transferring, loading and unloading.
 - ii. In areas where demolition work is to be carried out.
 - iii. Areas where excavation or earth moving activities are to be carried out.
 - iv. Arrangements for wheel washing should be made near the entry/ exit gates to prevent air pollution.
- b. The following activities shall be carried out: -
 - i. Providing hoardings/ barricading of not less than 3 m high along the site boundary.
 - ii. Providing dust screens, sheeting or netting along the perimeter if the building.
 - iii. Covering full stockpile of dusty material with impervious sheeting.
 - iv. Covering dusty load on vehicles by impervious sheeting before they enter or leave the site.
 - v. Transferring, handling/ storing dry loose materials like bulk cement, dry pulverized fly ash inside a totally enclosed system.

27.SPECIAL CONDITIONS OF CONTRACT

In the event of any discrepancy with clauses mentioned anywhere else in the tender with the clauses mentioned within special conditions of contract, the clauses mentioned within the special conditions of contract shall supersede those mentioned elsewhere.

I/We hereby declare that I/We have read and understood the above instructions which have been issued as conditions of the contract.

(Signature of the Tenderer)

[A] CHECK LIST: Details of Enclosures.

Sl.No	Description of item	Enclosed Page
1.	Tender Document including Letter of Proforma A	
2.	Audited Balance Sheet and Profit & Loss statement for the past three financial years duly certified by a Chartered Accountant.	
3.	Solvency certificate by a Scheduled Bank	
4.	Certificates / Reports for: a) Firm / Company registration b) Completion certificates c) Performance Reports d) Solvency Certificate	
5.	Details of key technical and administrative personnel employed by the firm/ company.	
6.	Any other important information.	
7.	Have you enclosed the entire drawings placed in the website	
8	Manufacturers authorization letter	

Date and Place:

SIGNATURE OF APPLICANT(S)

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

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

- Made misleading or false representation or deliberately suppressed the information in the forms, statements and enclosures required in the tender document.
- Record of poor performance such as, abandoning work, not properly completing the contract, or financial failures / weaknesses etc.
- Site visit of the ongoing & completed works will be done by the Bank Officials/Consultants.

Zonal Manager

Indian Bank , Zonal Office, Kolkata Central

14- India Exchange Place, Kolkata 700001

LIST OF MATERIALS OF APPROVED BRAND AND /OR MANUFACTURE

1.	CEMENT	GRADE 43 & 53 OP SLAG CEMENT OF ACC ULTRATECH/ ACC/ RAMCO / AMBUJA
2.	WHITE CEMENT	JK / BIRLA
3.	STEEL	SAIL/ TATA / JINDAL
4.	WATERPROOFING COMPOUND -	FOSROC / BERGER /ACC / ULTRATECH / SIKAL/ PIDILITE / ROFFE
5.	RED OXIDE ZINC CROMATE	BERGER / ASIAN PAINTS / JOHNSON AND NICHOLSON
6.	WATERPROOFING CEMENT PAINT	SNOECEM PLUS / BERGER
7.	GLAZING	MODIFLOAT / ASAHIFLOAT / SAINT GOBAIN
8.	STEEL GLASS	INDO ASHAL / TRIBENI & SHREEVALLABH
9.	SYNTHETIC ENAMEL PAINT	DULUX (ICI) /LUXOL (BERGER) / ASIAN PAINTS (LUXURY)
10.	ACRYLIC EMULSION	ICI / BERGER / ASIAN PAINTS
11.	COLLAPSIBLE GATE MANUFACTURER	ROLLING SHUTTER ANY ISI APPROVED
12.	ALUMINIUM WORK	JIDAL / HNDALCO
13.	WATERPROOFING TREATMENT	FOSROC /ULTRATECH / BERGER/ ROFFE/ DR FIXIT / PIDILITE
14.	TILE S FIXING ADHESIVE	ROFFE & PEDILITE / DR. FIXIT / ACC, ULTRATECH
15.	UPVC & PVC PIPES	ASTRAL/ FINOLEX/ ASHIRBAD
16.	MS CONDUITS	NIC, BEC OR EQUIVALENT ISI MARKED
17.	RIGID PVC CONDUIT	BEC, PLAZA,AKG KALINGA
18.	WOOD FRAME WORK / WOOD SECTION : ALL WOOD, MUST BE WELL SEASONED, FREE FROM KNOTS, OTHER DEFECTS DECAY AND DEFECTS DUE TO HANDLING AND TRANSPORTATION. WHEREVER NECESSARY, PROVIDE WITH ANTI – TERMITE TREATMENT.	MALAYSIAN SAL
19.	WOOD SKIRTING / MOLDING / LIPPING / BIDDING	WHITE BEACH / WHITE CEADER / CP TEAK
20.	WOOD PRESERVATIVE	STP PENTAPHENE PALE / TERMISEAL BY PCI / BISON
21.	FLUSH DOOR / BWP BLOCK BOARD (IS : 1659)	CENTURY / GREEN PLY
22.	LAMINATE (1.0 MM THK.) (IS : 2046)	GREEN LAM / CENTURY MICA / SUNMICA
23.	DOOR CLOSURE (HEAVY DUTY)	GODREJ / ARCHI / STERLING (DC 2000)
24.	FLOOR SPRING (HEAVY DUTY)	GODREJ / ARCHI / STERLING (FS 3000)
25.	DOOR LOCK (DEAD)	HAFFLE / HETTICH/ GODREJ
26.	DOOR HANDLES	HAFFLE / HETTICH/ GODREJ
27.	CYLINDRICAL LOCKS	HAFFLE / HETTICH/ GODREJ
28.	LOCKS (MULTIPURPOSE)	HAFFLE / HETTICH/ GODREJ
29.	NIGHT LATCH	HAFFLE / HETTICH/ GODREJ
30.	SCREWS	HAFFLE / HETTICH/ GODREJ
31.	HINGES	HAFFLE / HETTICH/ GODREJ
32.	ADHESIVE	FEVICOL SH / FEVIMATE TL
33.	GLASS	MODI / SAINT GOBAIN
34.	PAINTS (SYNTHETIC ENAMEL / ACRYLIC EMULSION)	ASAIN PAINTS / BERGER / ICI

35.	TEXTURE PAINT	ASAIN PAINTS / BERGER / ICI
36.	GLASS	MODI /SAINT GOBAIN
37.	EUROPEAN WC / WASHBASIN	CERA / KOHLER / JAGUAR / GROHE
38.	SANITARY FITTINGS	JAGUAR / CERA / KOHLER/ GROHE
39.	G.I. PIPE	TATA (MEDIUM)
40.	P V C & U P V C PIPE	ASTRAL / FINOLEX /ASHIRBAD
41.	CERAMIC TILES	CERA /JONSHON /SOMANY/ KAJARIA
42.	VITRIFIED TILES	CERA /JONSHON /SOMANY/ KAJARIA
43.	PVC DOORS	SYNTEX / GREEN/ ASIAN
44.	ANITI TERMIED MATERIALS	PCI / PESTCONTROL/ULTRATECH
45.	ALL OTHER ITEMS NOT COVERED ABOVE	AS PER SAMPLE APPROVED BY EMPLOYER/ CONSULTANT

LIST OF MATERIALS OF APPROVED BRAND AND /OR MANUFACTURE

1	SWITCH FUSE UNITS (HRC) (32A TPN & ABOVE)	SIEMENS / L&T / SCHNEIDER/ HAVELLE'S
2	TIMER (TSQ 100)	L & T
3	VOLTMETER & AMMETER	SIEMENS / L&T / SCHNEIDER/ HAVELLE'S
4	VOLTMETER & AMMETER SELECTOR SWITCHES	L & T / SCHNEIDER/ HAVELLE'S
5	PHASE INDICATING LAMP	SIEMENS / SCHNEIDER/ HAVELLE'S /INDO ASIAN
6	CAPACITOR	CROMPTON/SIEMENS/SCHNEIDER/ HAVELLE'S
7	HRC FUSES	GE POWER / SIEMENS / L & T / SCHNEIDER/ SCHNEIDER/ HAVELLE'S
8	POWER CABLE : XLPE	GLOSTER/POLYCAB/HAVELLS / NICCO
9	HRC FUSE BASE & CARRIERS.	GE POWER / SIEMENS / L & T / SCHNEIDER
10	1.1 KV GRADE PVC INSULATED ARMOUREDALUMINIUM CABLE (ISI MARKED)	UNIVERSAL / GLOSTER / NATIONAL / NICCO / SCHNEIDER/ HAVELLE'S
11	1.1KV / 600V GRADE PVC INSULATED & SHEATHED / INSULATED COPPER WIRE & FLEXIBLE CORDS (ISI MARKED).	FINOLEX/ HAVELLS
12	RCCB / ELCB / MCCB	LEGRAND/ SIEMENS / L&T / HAVELLE'S
13	SWITCH FUSE WITH REWIRABLE FUSES. (6A & 32A TPN)	LEGRAND/ SIEMENS / L&T / HAVELLE'S
14	ISOLATOR	LEGRAND/ SIEMENS / L&T / HAVELLE'S
15	CHANGEOVER SWITCH (ON LOAD TYPE)	LEGRAND/ SIEMENS / L&T / HAVELLE'S
16	MCB DISTRIBUTION BOARD	LEGRAND/ SIEMENS / L&T / HAVELLE'S
17	DISTRIBUTION FUSE BOARD WITH REWIREABLE FUSES	LEGRAND/ SIEMENS / L&T / HAVELLE'S
18	MINIATURE CIRCUIT BREAKER / MCB TYPE ISOLATOR	LEGRAND/ SIEMENS / L&T / HAVELLE'S SCHNEIDER
19	6/16 AMP MODULAR TYPE SWITCH / FLUSHED TYPE PLUG SOCKET	LEGRAND/ SIEMENS / L&T / HAVELLE'S SCHNEIDER
20	6/16 AMP MODULAR SWITCH / SOCKET, MODULE PLATE & MOUNTING -M.S. / PVC BOX.	LEGRAND/ SIEMENS / L&T / HAVELLE'S / SCHNEIDER
21	16/25 AMP., 2 MODULE ELECTRONIC REGULATOR	LEGRAND/ SIEMENS / L&T / HAVELLE'S SCHNEIDER
22	CEILING ROSE	KAY / EPP / ANCHOR / JJ

23	HOLDER	KAY / EPP / ANCHOR / JJ
24	ALARM BELL	ANCHOR/ CRABTREE
25	BLACK ENAMELLED STEEL CONDUITS (CONFORMING TO IS IN ALL RESPECTS)	BEC / SUPREME / AKG
26	COMPRESSION TYPE BRASS GLAND	DOWELLS / JOHNSON / COMET
27	CABLE TERMINATION SOCKET	DOWELL'S
28	LIGHT FITTING & LAMPS	PHILLIPS / HAVELLS
29	CEILING / WALL MOUNTED FAN	CROMPTON / POLAR / KHAITAN / HAVELL'S
30	EXHAUST FAN	CROMPTON / POLAR / KHAITAN / HAVELL'S
31	INDUSTRIAL TYPE SOCKET & TOP	LEGRAND/ SIEMENS / L&T / HAVELLE'S / SCHNEIDER
32	TELEPHONE WIRE	LEGRAND/ SIEMENS / L&T / HAVELLE'S / SCHNEIDER
33	STARTERS	LEGRAND/ SIEMENS / L&T / HAVELLE'S / SCHNEIDER
34	ALL OTHER ITEMS NOT COVERED ABOVE	AS PER SAMPLE APPROVED BY EMPLOYER/CONSULTANT