INVITATION OF TENDERS

IN A TWO BID THROUGH E- TENDERING PROCESS FOR

PROPOSED CONSTRUCTION OF BANKS OWN BUILDING BRANCH, CONSISTING OF (GROUND FLOOR), COMPRISING OF CIVIL, SANITARAY, WATER SUPPLY, OF ANDHRA PRADESH GRAMEENA VIKAS BANK IN H.NO. 1-44 &1-45 SITUATED IN AKUTHOTAPALLY VILLAGE, AMANGAL MANDAL, RANGA REDDY DISTRICT, TELANGANA,

PART 1. TECHNICAL BID

CONSULTANTS

abhikram-s
Architects, Interiors Designers, Valuers, Urban Planners, Project Managers

3-6-134 flat no 302 SVC-ROYAL DM apartments
STREET NO 18, HIMAYATNAGAR
HYDERABAD – 500 0029.
Tel. / Fax. : 040 -23261158.
E-mail: abhikramarchitects@gmail.com

Name of the Contractor _____

Address: _____

_____

PHONE ,EMAIL ID :_____

Last date for submission of completed Tender document on **10.10.2024 By 14.00 Hrs (IST)**

Opening of Technical bids on **10.10.2024 at 15.30 Hrs (IST)**

ANDHRA PRADESH GRAMEENA VIKAS BANK,
HEAD OFFICE, WARANGAL,
H.no-2-5-8/1, First floor,
Opp: Life line Hospital, Ramnagar,
Hanmakonda, Telangana-506001.

ANDHRA PRADESH GRAMEENA VIKAS BANK

(A Government of India Undertaking) **Head Office :: WARANGAL** (Sponsored by State Bank of India)

NOTICE INVITING TENDERS

PROPOSED CONSTRUCTION OF BANKS OWN BUILDING BRANCH CONSISTING OF (GROUND FLOOR), COMPRISING OF CIVIL, SANITARY, WATER SUPPLY, OF ANDHRA PRADESH GRAMEENA VIKAS BANK IN H.NO. 1-44 & 1-45 SITUATED IN AKUTHOTAPALLY VILLAGE, AMANGAL MANDAL, RANGA REDDY DISTRICT, TELANGANA, IN TWO BID THROUGH E- TENDERING PROCESS	**TENDER No.** **11** 19.09.2024

TENDER SCHEDULE

Tender availability	www.apgvbank.in & **https://etender.sbi**		
Date for PRE-BID (for clarifications) if any	**ON 26.09.2024 @11.30 AM**		**AT BANKS BRANCH OFFICE H.NO 4-48 APGVB BANK, AKUTHOTAPALLY VILLAGE, AMANGAL MANDAL, RANGA REDDY DISTRICT, 509321.**
Last Date of **SUBMISSION** of Tenders	Date **10.10.2024**	Upto **02.00 PM**	ON-LINE **Auction Website : https://etender.sbi**
Date of **OPENING/ VERIFICATION** of **TECHNICAL** Tenders	Date **10.10.2024**	At **03.30 PM**	
Tender Cost: Non- Refundable	**Rs.2000/-**		EMD and Tender Cost, Demand Drafts in favour of Andhra Pradesh Grameena Vikas Bank, Warangal.
Tender Value	**Rs.53,54,148.20/-**		
EMD	**Rs.54000/-**		
Validity of tender	TWO MONTHS		From the date of agreement

Appointed Officers for Enquiries	**Sudhakar Meda (9493126209)**	**Rohith Edunuri (9490157451)**
Tenders should be submitted online at: **https://etender.sbi/SBI/** For Tender Submission guidance: Cell: 7859800621 | 6352632098 6352631766 | 6352631968 9374519754 Support Details: Name: Lakshmi - laxmi@eptl.in Abhik – abhik.p@eptl.in	**EMD and Tender Cost DD's should be submitted Physically before the due date of Bid opening at the Head office of:** **ANDHRA PRADESH GRAMEENA VIKAS BANK,** HEAD OFFICE, WARANGAL, H.no-2-5-8/1, First floor, Opp: Life line Hospital, Ramnagar, Hanmakonda, Telangana-506001.	

PROCESS OF THE TENDER

1. Bidding Process - ON-LINE E-TENDERING PROCESS

1.1 RFP and Bid Submission

The bidder can download the tender document online either from our website www.apgvbank.com or from the e-procurement portal website **https://etender.sbi**. But the bidder has to submit the tender **ON-LINE** through the e-procurement portal website **https://etender.sbi** only.

M/s e-Procurement Technologies Ltd.
B-704, Wall Street - II,
Opp. Orient Club, Nr. Gujarat College,
Ahmedabad - 380 006. Gujarat State, India
Phone: +91-7859800621 | 6352632098 | 6352631766 | 6352631968 | 9374519754

Website : https://etender.sbi

The Bank shall not consider any request for date-extension for bid-submission on account of late receiving / downloading of RFP by any bidder. But, however, any suggestion or advice of value addition from the vendors to the tender or rectification of any short comings in tender may entail in issue of Corrigenda before the last date or postpone the tender as the Bank may deem necessary.

5.2 Mode of submission of tender – ON-LINE

Tenders are to be submitted **ON-LINE** by uploading in the portal advised above.

1. **Tender Fee & Earnest Money Deposit – The DDs should be scanned and uploaded.**
2. **Non-financial / Technical Bid – Should be signed on all pages and uploaded**
3. **Financial Bid / Price Bids - Rates should be filled in given portal.**

5.3 Procedure of opening of tender

After the last date of submission of the tenders, the Bank will open the technical bids **ON-LINE** and evaluate by verifying the eligibility documents submitted in the portal:

1. The EMD will be verified first. Those **not** submitting the **EMD DD (IN ORIGINAL)** to **APGVB** will be rejected at initial.
2. Other eligibility documents will be verified. Vendors should take **CARE** to submit all the eligibility requirements and it will be at the Bank's discretion to allow or not to allow to ask for any further documents for evaluation.
3. Price bids will be considered for only those vendors who have qualified in the technical verification.

Bank reserves the right to, open or not to open the financial bid of any vendor basing on the acceptance/rejection of non-financial bid and past performance.

5.4 Decision of the Bank shall be final

The decision of the Bank shall be final and binding on the vendor in the matter of interpretation of any clause included in this tender or any dispute arising out of the execution of tender. Bank can also terminate the tender without assigning any reason.

5.5 Address for submission

Bids should be submitted ON-LINE through the following Website:

Website : https://etender.sbi

M/s e-Procurement Technologies Ltd.
B-704, Wall Street - II,
Opp. Orient Club, Nr. Gujarat College,
Ahmedabad - 380 006. Gujarat State, India
Phone: +91-7859800621 | 6352632098 | 6352631766 | 6352631968 | 9374519754

The tender offer with all necessary documents mentioned are to be submitted on or before **10.10.2024, before 2.00 PM**.

Contact: For any technical enquires : 1. Sudhakar Meda - 9493126209
2. Rohith Edunuri - 9490157451

5.6 Change of Tender date in case of holiday

In the event of the specified date for bid-submission being declared a holiday for the Bank, the bids will be received up to the appointed time on the next working day.

5.7 Cost of Bidding – Vendor to bear

The bidder shall bear all costs associated with the preparation and submission of its bid and the Bank will, in no case, be responsible or liable for these costs, regardless of the conduct or outcome of the bidding process.

5.8 Late Bids – Rejection

Tenders cannot be submitted late.

5.9 Withdrawal / Amendment to RFP Contents:

The bank reserves the right to accept or reject any / all proposal(s), to revise the tender, to request one or more resubmissions or clarifications from one or more vendors, or to cancel the process in part or whole. The Bank also reserves the right to amend the RFP at any time prior to the last date for bid-submission. The Bank may, for any reason, whether at its own initiative or in response to clarification(s) requested by a bidder, modify the RFP contents by amendment. Amendment / Corrigendum will be notified on the Bank's website / portal and will be binding on participating bidders. The Bank shall not be liable for any communication gap. In order to provide prospective bidders, reasonable time to take the amendment into account for preparation of their bid, the Bank may, at its discretion, extend the last date for bid-submission.

5.10 Two Stage Bidding Process

The bidder will have to submit response to the RFP with the documents mentioned in PART-A and PART-B as mentioned below.

PART – A - TECHNICAL BID – <u>PROPOSED CONSTRUCTION OF BANKS OWN BUILDING BRANCH CONSISTING OF (GROUND FLOOR), COMPRISING OF CIVIL, SANITRAY, WATER SUPPLY, OF ANDHRA PRADESH GRAMEENA VIKAS BANK IN H.NO 1-44 &1-45 SITUATED IN AKUTHOTAPALLY VILLAGE, AMANGAL MANDAL, RANGA REDDY DISTRICT, TELANGANA,</u> should include the relevant supporting papers. Contract documents consist of, Notice Inviting Tender, Eligibility criteria, Form of Submission of tender, General Notes, General Conditions of Contract, Special Conditions of Contract, Form Of Agreement, Technical Specifications, Schedule of Approximate Quantities and Rates, General Specifications of Materials, Safety Code Model rules for protection, Abstract of General conditions of contract and Declaration.

2. **Tender Cost of Rs.2000/-** & **Earnest Money Deposit of Rs.54000/-**(Rupees Fifty four thousand only) in the form of two separate Demand Drafts issued by scheduled commercial bank favouring **Andhra Pradesh Grameena Vikas Bank, payable at Warangal**, must be part of the Technical Bid by uploading the scanned DDs.

HOWEVER,
TWO SEPARATE DEMAND DRAFTS FOR TENDER COST & EMD SHOULD BE SUBMITTED AT OUR CMPD-DEPARTMENT, HEAD OFFICE WARANGAL BEFORE THE LAST DATE OF SUBMISSION OF THE TENDER ONLINE.

Address : ANDHRA PRADESH GRAMEENA VIKAS BANK,
Head Office, H.No: 2-5-8/1, First Floor, Opp. to Life Line Hospital,
Ramnagar, Hanmakonda, Telangana-506001.

IF THE DEMAND DRAFTS DOES NOT REACH THE APGVB HEAD OFFICE, WARANGAL BEFORE THE LAST DATE AND TIME OF SUBMISSION, THE TENDER SHALL NOT BE CONSIDERED FOR EVALUATION.

- **Return of Earnest Money Deposit:** The earnest money of the unsuccessful bidders will be returned after entering into agreement with successful bidders.
- **Forfeiture of Earnest Money Deposit:** This EMD amount will be forfeited, if the successful bidder refuses to accept work order or having accepted the work order fails to carry out his obligation mentioned therein.

<u>SECURITY DEPOSIT:</u>

The EMD of the successful bidder/s will be held by the Bank throughout the rate contract period of the tender as **Security Deposit**. No interest will be payable on the Earnest Money Deposit/Security Deposit.

4. **Technical Bid:** The technical bid should **<u>COMPULSORILY</u>** include all the requirements of Technical specifications, Terms & Conditions and the following documents, duly filled in, stamped, signed, filed in the seriatim as below and serially numbered.

Contract documents consist of, Notice Inviting Tender, Eligibility criteria, Form of Submission of tender General Notes, General Conditions of Contract, Special Conditions of Contract, Form Of Agreement, Technical Specification of Electrical works, Schedule of Approximate Quantities and Rates, General Specifications of Materials ,safety code Model rules for protection, Abstract of General conditions of contract and Declaration.

PART – B (COMMERCIAL/PRICE BID) – PROPOSED CONSTRUCTION OF BANKS OWN BUILDING BRANCH CONSISTING OF (GROUND FLOOR), COMPRISING OF CIVIL, SANITRAY, WATER SUPPLY, OF ANDHRA PRADESH GRAMEENA VIKAS BANK IN H.NO 1-44 &1-45 SITUATED IN AKUTHOTAPALLY VILLAGE, AMANGAL MANDAL, RANGA REDDY DISTRICT, TELANGANA,
consisting of:

1. Price Bid and Drawings duly filled, stamped and signed on all pages for all items (partial quote is not acceptable).

2. The Bank expects the bidder to carefully examine all instructions, forms, terms & conditions, technical specifications etc., mentioned in this RFP. Failure to furnish all information required for submission of a bid not substantially responsive to the RFP in every respect will be at the bidder's risk and may result in the rejection of the bid without any further reference to bidder.

5.11 Conditional Bid
Any conditional bid is not valid and shall be summarily rejected

5.12 Rates quoted to be EXCLUSIVE of GST
The RATES quoted should be **EXCLUSIVE of GST.** No condition, such as, + GST will be accepted.

However, the quoted rates should be inclusive of all the charges for shipping, transit insurance and installation at the delivered locations.

TECHNICAL BID
ANNEXURE

INSTRUCTIONS TO THE TENDERER

The APGVB reserves the right to accept or reject any or all the tenders without assigning any reason whatsoever.

M/S_____

_____

_____

_____

Dear Sirs,

PROPOSED CONSTRUCTION OF BANKS OWN BUILDING BRANCH CONSISTING OF (GROUND FLOOR), COMPRISING OF CIVIL, SANITRAY, WATER SUPPLY, OF ANDHRA PRADESH GRAMEENA VIKAS BANK IN H.NO. 1-44 &1-45 SITUATED IN AKUTHOTAPALLY VILLAGE, AMANGAL MANDAL, RANGA REDDY DISTRICT, TELANGANA.

Sealed tenders on item rate basis are invited in two bid system i.e., Technical bid PART-1 and Price bid PART-2 for **PROPOSED CONSTRUCTION OF BANKS OWN BUILDING BRANCH CONSISTING OF (GROUND FLOOR), COMPRISING OF CIVIL, SANITRAY, WATER SUPPLY, OF ANDHRA PRADESH GRAMEENA VIKAS BANK IN H.NO 1-44 &1-45 SITUATED IN AKUTHOTAPALLY VILLAGE, AMANGAL MANDAL, RANGA REDDY DISTRICT, TELANGANA**, from reputed Civil works contractors who are eligible to tender as pre-qualified criteria mentioned in the tender document. Tender Documents can be downloaded from banks website. Tender cost Rs.2000/- (Rupees Two Thousand only) in form of DD in favor of APGVB payable at Warangal which is non-refundable.

1. Contract documents consist of PART-1 Notice Inviting Tender, Eligibility criteria, Form of Submission of tender General Notes, General Conditions of Contract, Special Conditions of Contract, Form Of Agreement, Technical Specification of furnishing and electrical works, Schedule of Approximate Quantities and Rates, General Specifications of Materials , Abstract of General conditions of contract and Declaration, PART 2 Schedule of quantities of work (BOQ), Drawings of the various items of work to be done.

2. The Contractors must quote in figures as well as in words. If any rates written in figures is different from the rate written in words, the rate mentioned in words will be considered.

3. The tender document must be filled in English and all the entries must be made by hand and written in ink. If any of the documents are missing or un-signed, the tender shall be considered invalid.

4. Earnest money amounting to **Rs.54,000/- (RUPEES FIFTY FOUR THOUSAND ONLY)** is to be deposited with the tender in the form of Demand Draft payable at Warangal and drawn in favor of **APGVB,** else the tender is liable for rejection.

5. The successful tenderer will have to pay an amount of initial security deposit, which shall be 2.0% of the accepted value of the tender including the EMD, by means of D.D. in favour of APGVB payable at Warangal. The initial security deposit is to be paid by the Contractor to APGVB within 7 days of intimation to him of the acceptance of the tender. The initial security deposit will be invested with the APGVB for the duration of the contract period and will be returned to the contractor without any interest, after issue of the virtual completion certificate. No interest is allowed on the retention money.

6. The acceptance of a tender is at the sole discretion of the Competent Authority. The Authority is not obligated to accept the lowest tender and reserves the right to reject any or all tenders received, without assigning any reasons. Tenders that do not meet all the prescribed conditions or are incomplete in any respect are liable to be rejected.

7. All compensation or other sums of money payable by the Contractor to Clients under the terms of this contract may be deducted from the security deposit, or from any sum that may be or may become due to the Contractor on any account whatsoever, and in the event of the Security Deposit being reduced by reasons of any such deductions, the Contractor shall within 10 days of being asked, shall deposit the amount in cash or by cheque, any sum which has been deducted from his security deposit.

8. Tenders containing any condition leading to unknown / indefinite liability, are liable to be summarily rejected.

9. If at all any rebate(s) is/are to be offered, the tenderer shall first quote his rates strictly according to the terms and conditions stipulated in tender document. The rebate(s) offered should be shown separately, specifying the conditions for such rebate(s). Failure to follow this procedure will render the tender liable to summarily rejection.

10. Canvassing in connection with tenders is strictly prohibited and the tenders submitted by the contractors who resort to canvassing will be liable to rejection.

11. The tenderer should quote their (own) rates for undertaking the work.

12. Time is the essence of the contract. The work should be completed in **90 DAYS** from the date of the work order issued to the contractor to commence the work. The successful Contractor will have to give CPM/PERT chart of various activities of works to be done so that the work gets completed within the stipulated time. The chart shall be submitted within 3 days from the date of acceptance of the tender.

13. Tenders for works shall remain open for acceptance for a period of **60 days** from the date of opening of tenders. If the tenderer withdraws his tender before the expiry of the said period or makes any modifications in terms and condition of the tender which are not acceptable to the APGVB, then the APGVB without prejudice to any other right or remedy be at liberty to forfeit the earnest money.

14. It will be obligatory on the part of the tenderer to tender and sign the tender documents for all the component parts and that, after the work is awarded, he will have to enter into an agreement for each component with the competent authority in the APGVB.

15. The tenderer should visit the site to ascertain the working conditions and local authority regulations / restrictions if any and other information required for the proper execution of the work.

16. The quantities of various items given in the schedule of quantities are approximate. The quantities of work may vary at time of allotment / execution of work. APGVB reserves the right to omit / delete any item(s) of work from the schedule at the time of allotment / before. Contractor will be paid for the actual work done at the site duly verified by the concerned official of the APGVB.

17. The unit price shall be deemed to be fixed price. In case of extra items, a record of labour charges paid shall be maintained and shall be presented regularly to APGVB for checking. The settlement will be made based on figures arrived at jointly and taking unit price given in the contract assigned to the successful Tenderer. In case of extra items where similar or comparable items are quoted in the tender, extra rates shall be based on tender rates.

18. If the rate quoted by the contractor for any item / items are not workable or abnormally lower than the market rate, the APGVB may demand Bank guarantee from the contractor for satisfactory completion of these work. The bank guarantee amount will be not be less than 50% of the estimated amount of the items for which the rates are not workable or abnormally low. This bank guarantee will be released after completion of these works (unworkable and abnormally low rated items (below 25% of Estimated rate)) to the satisfaction of APGVB

19. No employee of the APGVB is allowed to work as a contractor for a period of 2 years of his/her retirement from APGVB Services without previous permission of the APGVB. This contract is liable to be cancelled, if either the contractor or any of his employee is any time to be such a person who had not obtained the permission of APGVB as aforesaid before submission of the tender or engagement in the contractor's service.

20. Estimated Cost **: Rs.53,54,148.20 Plus GST as applicable.**

General Manager I,
APGVB, Head Office Warangal,
H.no-2-5-8/1, First floor,
Opp: Lifeline Hospital, Ramnagar,
Hanmakonda, Telangana-506001.

ELIGIBILITY CRIETERIA

SECTION – 1

S.No	Criteria	Documents Required
1	The contractor should be registered with CPWD or State PWD or MES or Railways or such other Government organizations or Registered in Public sector units or Public sector Bank's or Financial institutions or Reputed Corporate companies, MNC's, IT companies as **Civil contractors above 100 lac Category.**	**A copy of valid registration certificate from respective authorities.**
2	The Contractor should have minimum of **07 (Seven)** years' experience in the field as on 31.08.2024.	**Copy of Registration of the Firm or Copy of incorporation** **At least one copy of the work order from the clients prior to 01.08.2017**.
3	Bidder should have a minimum of **Rs. 16.06 Lakhs** annual average turnover per year during last three financial years i.e. 2020-21, 2021-22, 2022-23 from the related business.	**Audited balance sheet and P&L account for years mentioned and certificate from the Charted Accountant.**
4	The Tenderer should have executed the following work in a **single contract Civil works** during the last Seven (7) years ending with **31.07.2024** for at least, One (1) similar work costing **Rs.42.83 LAKHS. Excluding GST / Service tax or any other taxes.** **OR** Two (2) similar works each costing **Rs.26.77 LAKHS. Excluding GST / Service tax or any other taxes.** **OR.** Three (3) similar works each costing **Rs. 21.41 LAKHS . Excluding GST / Service tax or any other taxes.** **Similar work means carrying out full building works such as Excavation for foundations, PCC, Full Framed structure RCC for footings plinth beams, columns, roof beams, slabs, bar bending works) brickwork, plastering works, flooring works painting works, toilets works sanitary, plumbing (water supply and drainage works) flooring and cladding works in toilets and site development works such as paving around the building, compound wall works associated with building**	Satisfactory completion certificates of the works clearly indicating the cost & nature of work executed, date of commencement & completion issued by the Clients. The works shall Mandatorily be supported with form 26AS regarding the bills claimed for the Certificate submitted. (Similar work means should have executed out full building **works such as Excavation for foundations, PCC, Full Framed Structure RCC for footings plinth beams, columns, roof beams, slabs, bar bending works) brickwork, plastering works, flooring works painting works, toilets works sanitary, plumbing (water supply and drainage works) flooring and cladding works in toilets and site development works such as paving around the building, compound wall works associated with building) BUILDING for govt, cpwd any psu,mes railways etc.** **NOTE : BOQ'S OF THE WORKS (WORKS COMPLETION CERTIFICATES) SHOULD BE ATTACHED.**
5	**The contractor must have valid GST registration, PAN number.**	**Copy of the GST registration certificate and copy of PAN card.**

6	**The contractor should submit the Labour License.**	**Copy of the certificate of Central Labour License shall be Submitted by the successful tenderer.**
7	**The bidder should not have been black-listed/ barred by any Public Sector Bank, RBI or IBA or any other Government/PSU agencies during last Seven years.**	**An undertaking in this regard is to be submitted to the Bank by the Bidder on Rs.200/- Stamp Paper. Bank will verify the same.**

NO JOINT VENTURE PROJECTS ARE PERMITTED / ALLOWED.

SIMILAR WORKS :

SIMILAR WORK MEANS SHOULD HAVE EXCUTED FULL BUILDING WORKS SUCH AS EXCAVATION FOR FOUNDATIONS, ROCK CUTTING PCC, FULL FRAMED STRUCTURE (RCC FOR FOOTINGS PLINTH BEAMS, COLUMNS, ROOF BEAMS, SLABS, BAR BENDING WORKS) BRICKWORK, PLASTERING WORKS, FLOORING WORKS, PAINTING WORKS, TOILETS WORKS, SANITARY, PLUMBING (WATER SUPPLY AND DRAINAGE WORKS), FLOORING AND CLADDING WORKS IN TOILETS AND SITE DEVELOPMENT WORKS SUCH AS PAVING AROUND THE BUILDING, COMPOUND WALL WORKS ASSOCIATED WITH BUILDING FOR GOVT,CPWD ANY PSU,MES RAILWAYS ETC.

NOTE.

- **BIDDER MUST COMPLY WITH ALL THE CRITERIA MENTIONED ABOVE. NON- COMPLIANCE OF ANY OF THE CRITERIA WILL ENTAILED FO REJECTION OF THE BID SUMMARILY. THE BANK RESERVES THE RIGHT TO VERIFY / EVALUATE THE DOCUMENTS / CERTIFICATES SUBMITTED AS EVIDENCE BY THE BIDDER.**

- **RELEVANT COMPLETION CERTIFICATES OF HAVING COMPLETED SIMILAR WORKS (WORK ORDERS WILL NOT BE CONSIDERED) ISSUED BY COMPETENT AUTHORITY MUST BE ENCLOSED FAILING WHICH YOUR TENDER WILL BE SUMMARILY REJECTED.**

- **CERTIFICATES ISSUED BY THE PRIVATE BUILDERS, SUB CONTRACTUAL WORKS ARE NOT ELIGIBLE.**

- **COMMITTEE OF APGVB WILL INSPECT THE SITES OF WORKS / OFFICES OF CLIENTS FOR WHICH RELEVENT CERTIFICATES ARE ENCLOSED IN PRE QUALIFICATION TENDER.**

SECTION – 2

STRUCTURE AND ORGANIZATION

Name of the Tenderer:

Address

The tenderer is

1. An Individual

2. A Proprietary firm

3. A limited company or limited corporation

4. A member of a group of companies (If yes, give names, address and present description of other companies)

5. A Subsidiary of large organization
   (If yes, give name and address of the present organization) if the company is subsidiary, State what involvement if any, will the parent company have in the project.

   Attach the organization chart showing the structure of the organization including the names of the directors and position of officers.

6. Number of years of experience

- **As a prime contractor**

   i. In own country

   ii. Other countries (specify country)

7. How many years your organization been in business under your present name? Add what were your fields when you established your organization.

8. Were you ever required to suspend construction for a period of more than six months continuously after you started? If so, give the names of project and reasons of failure.

9. Have you ever not completed any work awarded to you? If so, give name of project and reasons for not completing work.

10. In how many projects were imposed penalty for delay? Please give details.

Signature of Contractor

SECTION – 3

FINANCIAL DETAILS

ANNUAL TURNOVERS FOR THE LAST THREE YEARS

S.No.	Year	Turnover from Similar works (in lakhs)	Turnover from all other sources (in lakhs)	Remarks
1				
2				
3				

1. List your sources of finance

   - Own resources
   - Bank credit
   - Other sources specifies if any?

2. Name and address of Bank from whom reference can be obtained.

   Name :

   Address :

   Ph.

Note :

1. Please attach certified/attested copies of the latest IT and/or Profit and Loss account statement to support the information furnished, failing which your firms will be summarily rejected.

2. Please attach certified Certificate of financial Soundness by Bank.

Signature of Contractor

SECTION – 4

EXPERIENCE PROFILE

DETAILS OF SIMILAR WORKS COMPLETED IN LAST SEVEN YEARS									
S.No.	Description of the work	Name and address of the Employer	Contract No. and date.	Date of award of work	Stipulated date of completion	Actual date of completion	Value of completed work (in lakhs)	Reasons for delay	Penalty if any
SIMILAR WORKS									
1									
2									
3									
4									

Note:
1. Tenderer must attach copies of the certificates issued by the Client.

2. Only those works shall be considered for evaluation for which copies of the certificates issued by the client are attached

Relevant certificates of having completed similar works issued by competent authority must be enclosed failing which your tender will be summarily rejected.

Signature of Contractor

DETAILS OF OTHER WORKS COMPLETED IN LAST SEVEN YEARS

S.No.	Description of the work	Name and address of the Employer	Contract No. and date.	Date of award of work	Stipulated date of completion	Actual date of completion	Value of completed work (in lakhs)	Reasons for delay	Penalty if any
OTHER WORKS									
1									
2									
3									

Note:

1. Tenderer must attach copies of the certificates issued by the Client.

2. Only those works shall be considered for evaluation for which copies of the certificates issued by the client are attached

Relevant certificates of having completed similar works issued by competent authority must be enclosed failing which your tender will be summarily rejected.

Signature of Contractor

SECTION – 5

RESOURCES PERSONNEL

DETAILS OF SKILLED AND TRANINED MANPOWER INCLUDING ENGINEERS AND TECHNICAL STAFF PRESENTLY EMPLOYED

S.No.	Name	Qualification	Designation	Total Experience (in years)	Remarks
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					

Signature of Contractor

DETAILS OF ENGINEERS AND TECHNICAL STAFF PROPOSED TO BE DEPLOYED ON THE PROJECT ALONGWITH BIO-DATA OF KEY PERSONNEL

S.No.	Name	Qualification	Designation	Total Experience (in years)	Remarks
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					

Note :

Tenderers are also required to attach the complete organization chart of the Engineering and Technical Staff proposed to be deployed on the project.

Signature of Contractor

SECTION – 6

RESOURCES PLANT & EQUIPMENT

DETAILS OF TOOLS, PLANT AND MACHINERY (IN WORKING CONDITIONS) OWNED BY THE TENDERER

S.No	Description	Make	Model & Year of Manufacture	Capacity	Condition	Nos. Available	Any other relevant information	Remarks
1								
2								
3								
4								

Note :

Signature of Contractor

DETAILS OF TESTING, MEASURING AND INSPECTION EQUIPMENT AND FACILITIES FOR CALIBERATION OWNED

S.No	Description	Make	Model & Year of Manufacture	Capacity	Condition	Nos. Available	Any other relevant information	Remarks
1								
2								
3								
4								

Note :

Signature of Contractor

DETAILS OF SAFETY APPLIANCES AND EQUIPMENT OWNED

S.No	Description	Make	Model & Year of Manufacture	Capacity	Condition	Nos. Proposed to be deployed	Any other relevant information	Remarks
1								
2								
3								
4								

Note :

Signature of Contractor

DETAILS OF PLANT MACHINERY PROPOSED TO BE DEPLOYED ON THE PROJECT

S.No	Description	Make	Model & Year of Manufacture	Capacity	Condition	Nos. Available	Any other relevant information	Remarks
1								
2								
3								
4								

Signature of Contractor

SECTION – 7

DETAILS OF ON GOING WORKS								
S.No.	Description of the work	Name and address of the Employer	Contract No. and date.	Date of award of work	Stipulated date of completion	Value of work as per order (in lakhs)	Value of work completed so far (in lakhs)	Remarks
1								
2								
3								
4								
5								

Note :

1. Please attach copies of the certificates issued by the Client.

2. Only those works shall be considered for evaluation for which copies of the certificates issued by the client are attached

Signature of Contractor

SECTION – 8

DOCUMENTS TO BE ATTACHED WITH THE TENDER BY THE TENDERER

1. Details of all works and similar works completed in last Seven years.
2. Annual Turnover for the last three years with supporting documents.
3. Registration of Company.
4. Partnership deed/Memorandum and Articles of Association of the firm.
5. Registration under Labour Laws.
6. GST Registration Certificate .
7. Details of Skilled and Trained Manpower including Engineers and Technical staff presently employed.
8. Details of Tools, Plants and Machinery (in working conditions) owned.
9. Details of Testing, Measuring and Inspection Equipment and facilities for calibration owned.
10. Details of Safety Appliances and Equipment owned
11. ISO 9000 certificate (if any).
12. **General Service tax registration certificate to be enclosed COMPULSORY**
13. Original Power of Attorney of the person signing the tender documents or photocopy duly attested by Notary Public.
14. Details of on-going works & supporting Documents.
15. Details of Plants and Machinery proposed to be deployed on the project.
16. Details of Engineers and Technical staff proposed to be deployed on the project along with organization chart and bio-data of key personnels.
17. Programme for execution of works.
18. Month wise Cash flow requirements.
19. Valid Electrical license.

Signature of Contractor

LETTER OF TRANSMITAL

General Manager- I,
APGVB, Head office,
H.no-2-5-8/1, First floor,
Opp: Lifeline Hospital,
Ramnagar, Hanmakonda,
Telangana-506001.
Sir,

SUB: **PROPOSED CONSTRUCTION OF BANKS OWN BUILDING BRANCH AND REGIONAL OFFICE CONSISTING OF (GROUND FLOOR) COMPRISING OF CIVIL, SANITRAY, WATER SUPPLY, OF ANDHRA PRADESH GRAMEENA VIKAS BANK IN H.NO 1-44 &1-45 SITUATED IN AKUTHOTAPALLY VILLAGE AMANGAL MANDAL RANGA REDDY DISTRICT TELANGANA,**

Having examined the details given in invitation and technical note for the work PROPOSED CONSTRUCTION OF BANKS OWN BUILDING BRANCH AND REGIONAL OFFICE CONSISTING OF (GROUND FLOOR) COMPRISING OF CIVIL, SANITRAY, WATER SUPPLY, OF ANDHRA PRADESH GRAMEENA VIKAS BANK IN H.NO 1-44 &1-45 SITUATED IN AKUTHOTAPALLY VILLAGE AMANGAL MANDAL RANGA REDDY DISTRICT TELANGANA, **hereby submit the pre-qualification information and relevant documents**
1. We hereby certify that all the statements made as information supplied in the enclosed forms and Annexure are true and correct.
2. We have furnished all information and details necessary as per check list for pre-qualification and have no further pertinent information to supply.
3. We submit the following certificates in support of our suitability, technical Knowledge, Capability for having successfully completed the following works.

Name of the work — Client / Owner

1.

2.

3.

Enclosures:

Signature of the tenderer
Seal of Tenderer
Date of Submission

Signature of Contract

FORM OF SUBMISSION OF TENDER

TO
General Manager- I,
APGVB, Head office,
H.no-2-5-8/1, First floor,
Opp: Lifeline Hospital,
Ramnagar, Hanmakonda,
Telangana-506001.

Dear Sir/s,

Ref: PROPOSED CONSTRUCTION OF BANKS OWN BUILDING BRANCH AND REGIONAL OFFICE CONSISTING OF (GROUND FLOOR) COMPRISING OF CIVIL, SANITRAY, WATER SUPPLY, OF ANDHRA PRADESH GRAMEENA VIKAS BANK IN H.NO 1-44 &1-45 SITUATED IN AKUTHOTAPALLY VILLAGE AMANGAL MANDAL RANGA REDDY DISTRICT TELANGANA,

I / We the undersigned have carefully gone through and clearly understood, after visiting the site, Contract documents consist of **PART 1** Notice Inviting Tender, Eligibility criteria Form of Submission of tender General Notes, General Conditions of Contract' Special Conditions of Contract, Form Of Agreement, Technical Specification of INTERIOR FURNISHING, ELECTRICAL, LAN AND FIRE ALARM works ,Schedule of Approximate Quantities and Rates General Specifications of Materials , Abstract of General conditions of contract and Declaration **PART 2** tender drawings , price Schedule of Probable Quantities prepared by your Architects **M/s.abhikram-S,** 3-6-134, Flat no.302, SVC-ROYAL DM Apartments, street no.18, Himayatnagar Hyderabad 500029

I / we do here by undertaken to execute and complete the whole or part of the work (as desired by you) at the respective rates quoted.

I / We are depositing as earnest of money sum of **Rs.54000/- (RUPEES FIFTY FOUR THOUSAND ONLY)** by demand draft in favour of **APGVB ,payable at Warangal** along with this tender for due execution of the work at my / our tendered rates together with any variations which shall be adjusted at prices based by the Architects / Employer on our tendered rates.

In the event of this Tender being accepted I / we agree to enter into an agreement as and when required and executed the contract according to your form of Agreement, in default whereof, I / we do hereby bind my-self / ourselves to forfeit the aforesaid deposit.

I / we further agree to complete the work included in the said schedule of quantities within ____ days from the date of the work order issued to commence the same.

Date of commencement shall be either one-week, from the date, the acceptance letter is issued to the contractor or day on which the contractor is instructed to take possession of site whichever is later.

I / we agree not to employ sub-contractors other than those that may be approved by Architects / Employer.

I/We agree to indemnify the Bank against all liabilities and litigation that may arise due to any actions or omissions on my/our part, whether at the time of commencement of the work or after the completion of the work.

I / We agree to pay Government, General and Sales Tax (State and Central), Excise and Octroi duties, service tax , insurance and all other taxes including works contract extra, turnover tax, VAT etc as prevailing foretime to time, on such items for whom same is to be levies, and the rates quoted by me / us are inclusive of the same.

Yours Faithfully,

Contractor's Signature_____

Designation _____

Address_____
1.

2.

3.

GENERAL NOTES

1. PROCEDURE OF FILLING AND SUBMISSION OF TENDER

i) The tenderers should quote their rates in figures and words where the quantities have been indicated in the relevant items of the schedule of quantities, failures to do so may invalidate the tender. Erasing or over writing shall not be allowed. Corrections in the tender should be avoided if this becomes unavoidable, the entire rate (and not a portion only) shall be scored out and signed (not simply initiated) by the tenderer as token of such cancellation. A fresh rate in specified manner shall then be correctly written.

ii) In the event of the tender being submitted by a firm, it must be signed by a member or members of the firm having legal authority to do so, and if called for, the legal documents in support thereof must be produced for inspection and the same in the case of the firm carried out by one member of a joint family. It must disclose, that the firm is duly registered under the India Partnership Act. Any tender signed by a member not holding a power of attorney shall be treated as informal.

iii) All corrections are to be initiated.

iv) The tenderer is to quote this rate in ink both in words and figures in English. In case of any variation, the rates quoted in the words in the "Original" copy of the tender shall only be valid. The tender shall be clearly and legibly written and whole writing must be by the hand of the person signing the tender and with the same pen and ink. Failure to do so may invalidate the tender.

The employer reserves to itself the right to accept the lowest or any tender or split up and distribute any items of work to any specialist firm or firms without assigning any reason. The employer reserves the right to split up and distribute the work to more than one tenderer, if necessary. Person tendering shall submit and return together with his tender, this condition of contract, specifications and the priced schedule of quantities and all set of papers signed on all the pages in a sealed cover. Signature will be deemed to be the acceptance of the contents of these tender papers by the tenderer. All enclosures to the tender shall be in duplicate.

Tenderer shall note that their tenders shall remain open for acceptance for a minimum period of 2 months from the date of opening the tenders. The tender must be unconditional. Conditional tenders may be summarily rejected.

Submission of tenders:

The tenders are to be submitted along with the copy of "General Clause of Contract and Technical Specifications" duly signed by the tenderer in a sealed cover at the office as mentioned in the tender notice. The authorized representatives of tenderer are present during opening of the tender.

2. RATES TO INCLUDE:

While quoting their rates the tenderer should include the following if otherwise not stated herein before.

a) Necessary cost of taking samples of materials supplied by them for construction including cement and steel, wood/tiles etc., testing of the same at Govt.'s / approved laboratory including transportation, cost of the samples, as and when required.

b) Submission of test reports of other materials as may be specified by Architects / PMC

3. STORAGE OF MATERIALS:

The contractor shall not store their materials and debris within the premises other than the work site handed over to him.

4. LABOUR HUTMENT:

Shelter or stay for the labourers has to be arranged by the contractor at his own expense and responsibility.

5. IDLE LABOUR:

In case the construction work is held up for any site conditions not attributable to the contractors or for any decisions instructions / want of details from Employer / Architects or for any of the conditions as per Article 30, the contractor shall be allowed reasonable extension of time by the employer but any claim for idle labour shall lie under the above conditions. Contractor's quoted rates should include for all such contingencies.

6. The contractor shall engage one competent person at site who shall take the instructions from the Architects. The work should not suffer due to lack of supervision, manpower and materials.

7. The Contractor is required to co-ordinate his works along with other agencies working at site. He has to reimburse any of the damage made by him or any of his representatives for any other agency or owner at site.

8. The contractor is required to fabricate a sample where required, or any item so installed for approved. Any changes made by the Architect's / Employers, in the sample to the specifications as mentioned in the tender, shall not be deducted or paid extra. The bulk production of the furniture can only be taken up after the final approval of the sample of the item.

9. The partitions shall be so fixed that all joinery work is in plumb and true in line. The partition frame shall be firmly fixed to the floor and ceiling by using suitable wall plugs and screws.

10. The contractor shall check all dimensions before fabricating and fixing the partitions or ceiling in position at site.

11. All measurements given in the schedule hereunder are for the purpose of tender only. Payment will be made on actual measurement of the work done.

12. All measurements shall be as per relevant I.S.I. standards.

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 Employer / Architect.

1. INTERPRETATION

In constructing 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.

I. **Employer**: The term employer shall denote **APGVB** with their Head Office at H.no-2-5-8/1, Fisrt floor, Opp: Lifeline Hospital, Ramnagar, Hanmakonda, Telangana-506001 and any of its employees representative authorized on their behalf.

II. **Architects / PMC Consultants:** The term Architects shall mean **M/s. abhikram-s**,

III. **Contractor:** The term contractor shall mean _____ (Name and address of the contractor) and his / their heirs, legal representives, assigns &successors.

IV. **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 erection thereon, allotted by the employer for the contractors use.

V. **Site Supervision:** Supervision by the Architect .

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

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

In case any detailed Drawings are necessary contractor shall prepare such detailed drawings and / or dimensional sketches therefore and have it confirmed by the Employer / Architects as case may be prior to taking up such work.

The contractor shall ask in writing for all clarifications on matters occurring anywhere in drawings, specifications and schedule of quantities or to additional instructions at least 10 days ahead from the time when it is required for implementation so that the Employer may be able to give decision thereon.

VII. **"The Works"** shall mean the work or works to be executed or done under this contract.

VIII. **"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 status.

IX. **"The Schedule Of Quantities"** shall mean the schedule of quantities as specified and forming part of this contract.

X. "**Priced Schedule Of Quantities"** shall mean the schedule of quantities duly priced with the accepted quoted rates of the contractor.

XI. "**Contract"** shall mean Contract documents consist of Notice Inviting Tender, Eligibility criteria Form of Submission of tender General Notes, General Conditions of Contract' Special Conditions of Contract, Form Of Agreement, Technical Specification of Interior furnishing & electrical works, Schedule of Approximate Quantities and Rates General Specifications of Materials , Abstract of General conditions of contract and Declaration the schedule of quantities, specifications and drawings attached here to and duly signed.

XII. '**Contract Price'** shall mean the sum named in the Tender subject to such additions thereto or deductions their from as may be made under the provisions hereafter contained.

XIII. **'Notice in Writing'** or written notice shall mean a notice in writing, type or printed characters sent (unless delivered personally or otherwise provided to have been received) by registered post to the last known private or business address or registered office of the addressee and shall be deemed to have been received when in the ordinary course of post it would have been delivered.

XIV. **'Net Prices'** any arriving at the Contract amount the Contractor shall have added to or deducted from the total of the items if the Tender any sum, either as a percentage or otherwise, then the net price of any item in the tender shall be the sum arrived at by adding to or deducting from the actual figure appearing in the tender as the price of that item a similar percentage or proportionate sum. Providing always that in determining the percentage or proportion of the sum so added or deducted by the contractor, the total amount of any Prime Cost items and provisional sums of money shall be deducted from the total amount of the Tender. The expression 'net rates' or 'net prices' when used with reference to the contract or account shall be hold to mean rates or prices so arrived at.

XV. **'Virtual Completion'** shall mean the building is in the opinion of the Architect and Employer fit for occupation.

XVI. Words importing persons include firms and corporations. Words importing the singular only, also include the plural and vice verse where the Context requires.

2. SCOPE OF CONTRACT

The Contractor shall carry out and complete the said work in every respect in accordance with this Contract and with the directions of and to the satisfaction of the Architect and Employer. The Architect with approval of Employer issue further drawings and / or written instructions, details directions and explanations which hereafter collectively referred to as 'Architect's Instructions'. In regard to:

a) The variation or modification of the design quality or quantity of works or the addition or omission or substitution of any work.

b) Any discrepancy in the drawings or between the schedule of quantities and / or drawings and / or specification.

c) The removal from the site of any defective material brought thereon by the contractor and the substitution of any other material thereof.

d) The demolition removal and / or re-execution of any work executed by the contractor/s.

e) The dismissal from the work of any persons employed there upon.

f) The opening up for inspection of any work covered up.

g) The rectification and making good of any defects under clauses hereinafter mentioned and those arising during the maintenance period (Defect Liability Period).

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

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

3. TENDERER SHALL VISIT THE SITE

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

4. TENDERS

The entire set of tender paper issued to the tenderer should be submitted fully priced and also signed on the last page together with initials on every page. Initial / signature will indicate the acceptance of the tender papers by the tenderer.

(Also see general rules and instructions for the guidance of Tenderers)

The schedule of quantities shall be filled in as follows:

I. Amount column to be filled in for each item and the amount for each sub head as detailed in the "Schedule Of Quantities".

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

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

The works will be paid for as "measured work" on the basis of actual work done and not as "lumpsum" 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 items of work will be made for the actual work done on the basis of lumpsum charges as will be assessed to be payable by the Employer / Architects.

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

The tenderer shall note that his tender shall remain open for consideration for a period of three months from the date of opening of the tender.

5. AGREEMENT

The successful contractor will be required to sign agreement in accordance with the draft agreement from enclosed and the schedule conditions. The contractor shall pay for all stamps and legal expenses, incidental thereto. However the written acceptance by the employer of a tender will constitute a binding contract between the employer and the person so tendering whether such formal agreement is or is not subsequently executed.

6. AUTHORITIES, NOTICES, PATENT RIGHTS AND ROYALTIES:

The Contractor shall confirm to the provisions of the statutes relating to the works, and so to the regulation and bylaws of an local authority, and of any water, lighting and other companies on authorities with whose systems the structures are proposed to be connected and shall before making any variation from the drawings or specifications, that may be necessitated by so conforming given to the Architect's written notice, specifying the variations proposed to be made and the reason for making it apply for instruction thereon. In case, the Contractor shall not within the 10 days receive such instruction, he shall proceed with the work conforming to the provisions, regulations or bylaws in questions.

The Contractor shall bring to the attention of the Architect all notices required by the said acts, regulations or bylaws to be given to any Authority, and pay to such authority or to

any Public Officer all fees that may be properly chargeable in respect of the works, and lodge the receipts with the Architect /Employer.

The Contractor shall identify the Employer against all claims in respect of patent rights, designs, trade marks or name or the protected rights in respect of any constructional plant, machine, work or material used for or in connection with the works or temporary works and from and against all claims, demands, proceedings, damages, costs, charges, and expenses whatsoever in respect thereof or in relation thereto. The Contractor shall defend all actions arising from such claims, unless he has informed the Architects, before any such infringement and received their permission to proceed and shall himself pay all royalties, license fees, damages, coat and charges of all and every sort that may be legally incurred in respect thereof.

7. NOTICES AND STATUTORY REGULATIONS:

The contractor shall give all notices and pay all fees and shall comply all Acts and Regulations for the successful completion of the contract works. The whole of the work is to be complied with as per the requirements and bylaws of the relevant statutory authorities including contract labour (Regulation and Abolition) Act 1970.

8. **QUANTITY OF WORK TO BE EXECUTED**

The Schedule of Quantities unless otherwise stated shall be deemed to have been prepared in accordance with the Standard Procedure of the Architects shall be considered to be approximate and no liability shall attach to the Architect for any error may be discovered therein. The Employer reserves the right to execute only a part or the whole or any excess thereof without assigning any reason therefore.

The Contractor shall be deemed to have satisfied himself before tendering to the correctness and sufficiency of his tender for the works and of the prices stated in the Schedule of Quantities and / or the Schedule of Rates and Prices, which rates and prices shall cover all things necessary for the completion of the works.

9. **OTHER PERSONS ENGAGED BY THE EMPLOYER**

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

10. EARNEST MONEY AND SECURITY DEPOSITS

The tenderer will have to deposit an amount of **RS.54000/- (RUPEES FIFTY FOUR THOUSAND ONLY) in the form of Demand draft drawn in favour of APGVB PAYABALE AT WARANGAL** at the time of submission of tender as an Earnest money. The employer is not liable to pay any interest on the earnest money. The Earnest money of the unsuccessful tenderers will be refunded without any interest soon after the decision to award the work is taken after the expiry of the validity period of the tender. The successful tenderer to whom the contract is awarded will have to deposit as initial security deposit a further sum to make up 2.0% of the value of the accepted tender including the Earnest Money. The initial security deposit will have to be made within 14 days from the date of acceptance of tender, failing which the employer at his discretion may revoke the letter of acceptance and forfeit the earnest money deposit furnished along with the tender. Apart from the initial security deposit made as above, retention money shall be deducted from progressive running bills @ 8% of the gross

value of each running bill until the total security deposit, i.e., the initial security deposit plus the retention money equals to (Total Security Deposit EMD (2.0 %) + FSD 5.0 %)

50% of the above security deposit will be refunded on completion of the work and after issue of virtual completion. The balance 50% will be refunded after defects liability period of 1year from the date of virtual completion.

11. CONTRACTOR TO PROVIDE EVERYTHING NECESSARY

The Contractor 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 provide that the same can reasonably be inferred there from and if the contractor finds any discrepancies therein he shall immediately and in writing , refer the same to the Employer / Architects whose decision shall be final and binding.

12. TIME OF COMPLETION, EXTENSION OFTIME & PROGRESS CHART

The Contractor shall be allowed admittance to the site on the 'Date of Commencement' stated in the Appendix, and he shall thereupon and forthwith begin the works and shall regularly proceed with to complete the same (except such painting or other decorative work as the Architect may desire to delay). On or before the 'Day of Completion " stated in the Appendix subject nevertheless the provision for the extension of time hereinafter contained.

If in the opinion of the Architect the works be delayed:

a. By force major or

b. By reason of any exceptionally inclement weather or

c. By reason of proceedings taken or threatened by or dispute with adjoining or neighboring owners of public authorities arising, than through the Contractor's won default or

d. By the works or delays of the contractors tradesmen engaged or nominated by the Employer / Architect and not referred in the Schedule of Quantities and / or specifications or

e. By reason of civil, commotion, local combination of workmen or strike or lock-out effecting any of the buildings traders or

f. By reason of the Architect's instructions as per clause 2, or

g. In consequence of the Contractor not having in due time, necessary instructions from the Architect for which he shall have specifically applied in writing ahead of time, giving the Architect reasonable time to prepare such instructions, the Architects shall make a fair and reasonable extension of time for completion of the Contract works In case of such strike or lock-out, the Contractor shall as soon as possible, give written notice thereof the Architect, but the Contractor shall nevertheless constantly use his endeavors to prevent delay and shall do all they may reasonably be required, to the satisfaction of the Architect to proceed with the work. The Contractor on starting the works shall furnish to the Employer / Architect a PERT / CPM Programme for carrying out the work stage

in the stipulated time fore the approval of Architect / Employer and follow strictly the approved time schedule incorporating charges if any, to ensure the completion of the work in stipulated time. A graph or chart on individual work shall be maintained showing the proportionate progress of work week by week by Architect a weekly progress report stating the number of skilled and un skilled laborers employed on the work, working hours done, place, type, and quantity of work done during the period.

The Contractor must inform the Architect within 10 days in advance of all drawings and detailed required by him from time to time. The Contractor shall adhere to the approved program and arrange for the materials and labour etc accordingly.

Despite repeated instructions, if the Contractor fails to show proportionate progress of the work, the Architect / Employer may take suitable action against the contractor as deemed fit without prejudice to any terms and conditions of the contract.

13. LIQUIDATED DAMAGES

Should the work be not completed to the satisfaction of the Employer / Architects within the stipulated period, the contractor shall be bound to pay to the Employer a sum calculated as given below by way of liquidated damages and not as penalty during which the work remains uncommenced or unfinished after the expiry of the completion date.
If the contractor fails to complete the work by the Scheduled date of completion or within any sanctioned extended time, he will have to pay liquidated damages at 0.5% of contract amount for each week beyond the date that the work remains incomplete subject to maximum of 7%of the contract value (without extra items).

14. NOTICE AND PATENTS OF APPROPRIATE AUTHORITY AND OWNERS

The contractor shall conform to the provisions of any Acts of the Legislature relating to the work, and to the Regulations and Bye-Laws of any authorities, and / or any water, lighting and other companies, and / or authorities with whose systems the structures were proposed to have connection and shall before making any variations from the drawings or specifications that may be associated to so conform, give the Employer / Architects written notices specifying the variations proposed to be made and reasons for making them and apply for instruction thereon. The Employer / Architects written notices specifying the variations proposed to be made and reasons for making them and apply for instruction thereon. The Employer / Architects on receipt of such intimation shall give a decision within a reasonable time.
The contractor/s shall arrange to give all notices required for by the said Acts, Regulations or Bye-laws to be given to any authority, and to pay to such authority or to any public officer all fees that may be properly chargeable in respect of the work and lodge the receipts with the Employer.

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

16. MATERIALS, WORKMANSHIP, SAMPLES, TESTING OF MATERIALS.

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

All mandatory tests shall be carried out as per CPWD specifications. If required by the Employer / Architects, the contractor shall have to carry out tests on materials and workmanship in approved materials testing laboratories or as prescribed by the Employer / Architects 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 bome by the contractor. No extra payment on this account should in any case be entertained.

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 charges for import duties, sales tax, octroi and other charges and must be the best of their kind available and the contractors 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 to the Employer / Architects when so directed by the Engineer / Architects and written approval from Employer / Architects must be obtained prior to placement of order.**

Any damage (during constructions) to any part of the work for any reasons due to rain, storm or neglect of contractor shall be rectified by the contractor in an approved manner at no extra cost.

Should the work be suspended by reason of rain, strike, lockouts or any other cause, the contractor 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 contractor 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-contractor and any damage caused must be made good by the contractor at his own expenses.

17. REMOVAL OF IMPROPER WORK

The Employer shall during the progress of the work have power to order in writing from time to time the removal from the work within such reasonable time or times as may be specified in the order of any materials which in the opinion of the Employer / Architects are not in accordance with specification or instructions, the substitution or proper re-execution of any work executed with materials or workmanship not in accordance with the drawings and specifications or instructions. In case the contractor refuses to comply with the order the Employer shall have the power to employ and pay other agencies to carry out the work and all expenses consequent thereon or incidental thereto as certified

by the Employer / Architects shall be bome by the contractor or may be deducted from any money due to or that may become due to the contractor. No certificate, which may be given by the Architects, shall relieve the contractor from his liability in respect of unsound work or bad materials.

18. SITE SUPERVISION

The Architect may appoint a Site supervisor or clerk of works who shall be representative of the Architect. The duties of the supervisor representative are to watch and supervise the works and to test any materials to be used of workmanship employed in connection with the works. He shall have no authority either to relieve the Contractor of any of his duties or obligations under the Contract, or except those expressly provided hereunder, to order any work involving delay or any extra payment by the Employer or any variation of or in the works.

The contractor shall afford the Employer's representative every facility and assistance for examining the works and materials and checking the measuring time and materials. Neither the Employer's representative nor any assistant to the Architect shall have power to revoke, alter enlarge or relax the requirements of this Contract, or to Sanction any day-work, additions, alterations, deviations or omissions unless such an authority may be specially conferred by a written order of the Architect / Employer.

The Employer's Representative shall have to give notice to the Contractor or his foremen about the non-approval of any work or materials and such works shall be suspended or the use of such material should be discontinued until the decision of the Architect is obtained, the work will from time to time be examined by the Architect or the Employer's representative but such examinations shall not in any way exonerate the Contractor from the obligation to remedy defects which may be found to exist at any stage of the work of after the same is completed. Subject to the limitations of this cause, the Contractor shall take instruction from the Architect / Employer.

19. CONTRACTOR'S EMPLOYEES

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

The contractor shall employ local labourers on the work as far as possible. No labourer below the age of sixteen years and who is not an Indian National shall be employed on the work.

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

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

a) The payment of Wages Act.
b) Employer's Liability Act.
c) Workmen's Compensation Act.

d) Contract Labour (Regulation & Abolition) Act. 1970 and Central Rules 1971
e) Apprentices Act 1961
f) Minimum Wages Act
g) Any other Act or enactment relating thereto and rules framed there under from time to time.

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

The contractor shall comply at his own cost with the order for requirement of any Health Officer of the State or any local authority or of the Employer regarding the maintenance of proper environmental sanitation of the area where the contractor's labourers are housed or accommodated, for the prevention of small pox, cholera, plague, typhoid, malaria and other contagious diseases. The contractor 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 contractor to prevent nuisance of any kind on the works or the lands adjoining the same.

The contractor shall arrange to provide first aid treatment to the labourers engaged on the works. He shall within 24 hours of the occurrence of any accident at or about the site or in connection with execution of the works report such accident to the Employer and also to the competent Authority where such report is required by law.

20. DISMISSAL OF WORKMEN

The contractor shall on the request of the Employer immediately dismiss from works any person employed thereon by him, who in the opinion of the Employer be unsuitable or incompetent or who may misconduct him. Such discharges shall not be the basis of any claim for compensation or damages against the Employer or any of their officer or employee.

21. ASSIGNMENT

The whole of the works included in the contract shall be executed by the contractor and the contractor shall not directly or indirectly transfer, assign or underlet the contract or any part, share or interest therein nor, shall take a new partner, without written consent of the Employer and no subletting shall relieve the contractor 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 contractor 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-contractor or of any of his or a sub-contractor'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-alias, 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 contractor shall indemnify the Employer and hold harmless in respect of all and any expenses arising from any such injury or damages to the person or property as aforesaid and also in respect of any claim made in respect of injury of damage under any acts on compensation or damage consequent upon such claim.

The contractor shall reinstate all damages 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 of third parties.

The contractor shall affect the insurance necessary and indemnify the Employer entirely from all responsibility in this respect. The insurance must be placed with a company approved by the Employer and must be effected jointly in the name of the Employer and contractor and the policy lodged with the Employer. The scope of insurance is to include damage or loss to the contract itself till this is made over in a complete state. Insurance is compulsory and must be affected from the very initial stage. The contractor shall also be responsible for any thing, which may be excluded from damage to any property arising out of incidents, negligence or defective carrying out of this contract.

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

23. MEASUREMENTS

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

24. PAYMENTS

All bills shall be prepared by the contractor in the form prescribed by the Employer's / Architects. Normally one interim bill shall be prepared each month subject to minimum value for interim certificate as stated in these documents. The bills in proper form 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 work done will be physically recorded by the contractor and shall be check measured by the architect/representative in the presence of the contractor and also check measured by the Engineer in charge APGVB.

The bill prepared by the Architect will be Scrutinized by the department and will be recommended to the competent Authority for Payment duly deducting at source retention Money ,IT and other taxes as applicable , as mentioned in the clauses.

If the Employer has supplied any materials or goods to the contractor, the cost of any such materials or goods will be progressively deducted from the amount due to the contractor 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 removal and taken away and reconstructed, or re-erected or be considered as and 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 any way the power of the Employer under these conditions or any of them as to the final settlement and adjustment of the accounts or otherwise or in any other way vary or affect the contract. The final bill shall be submitted by the contractor within one week of the date fixed for completion of the work or of the date of certificate of completion furnished by the Architect and payment shall be made within one week from the date of receipt of Architect's certificate.

Final Payment

The final bill shall be accompanied by a certificate of completion from the Architects. Payments of final bill shall be made after scrutiny by the department which will be recommended to the competent authority for payment after deduction of Retention Money as specified in clause 11 of these conditions, which shall be refunded after the completion of the Defects Liability Period after receiving the Architect's certificate that the contractor has rectified all defects to the satisfaction of the Architects. The acceptance of the payment of the final bill by the contractor would indicate that he has no further claim in respect of the work executed.

25. VARIATION / DEVIATION

The tender rates shall be fixed and applicable for any increase or decrease in the tendered quantities. The Architect can increase or decrease any quantities to any extend or even delete particular item as per the site requirements and the contractor shall not be paid any thing extra on this account. Nothing extra will be paid by the APGVB on account of omission / deletion of items or decrease in the quantity of items. The APGVB 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.

26. SUBSTITUTION

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

27. CLEARING SITE ON COMPLETION

On completion of the works the contractor 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 workmanlike condition to the satisfaction of the Employer/Architects.

28. DEFECTS AFTER COMPLETION

The contractor shall make good at his own cost and to the satisfaction of the Employer all defects, shrinkage, settlements or other faults, which may appear within 12 months after completion of the work. In the default, the Employer may employ and pay other persons to amend and make good such damages, losses and expenses consequent thereon or incidental thereto shall be made good and borne by the contractor and such damages, loss and expenses shall be recoverable from him by the Employer or may be deducted by the employer, in lieu of such amending and making good by the contractor, deduct from any money due to the contractor 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 contractor from the amount retained under clause no.10 together with any expenses the Employer may have incurred in connection therewith.

29. CONCEALED WORK

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

30. 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.

31. SUSPENSION OF WORKS

If the contractor except on account of any legal restraint upon the Employer preventing the continuance of the work or in the opinion of the Employer shall neglect or fail to proceed with due diligence in the performance of his part of the contract or if he shall more than once make default, the Employer shall have the power to give notice in writing to the contractor 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 contractor 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 compiled with. If the contractor fails to start the work within seven days after such notice has been given to proceed with the works as therein prescribed, the employer may proceed as provided in clause 32. (Termination of Contract by Employer)

32. TERMINATION OF CONTRACT BY EMPLOYER

If the contractor being a company go into liquidation whether voluntary or compulsory or being a firm shall be dissolved or being an individual shall be adjudicated insolvent or shall make an assignment or a composition for the benefit of the greater part, in number of amount of his creditors or shall enter into a Deed or arrangement with his creditors, or if the Official Assignee in insolvency, or the Receiver of the contractor in insolvency, shall repudiate the contract, or if a receiver of the contractor's firm appointed by the court shall be unable within fourteen days after notice to him requiring him to do so, to show to the reasonable satisfaction of the employer that he is able to carry out and fulfill the contract, and if so required by the employer to give reasonable security therefore, or if the contractor 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 contractor, or shall assign, charge or encumber this contract or any payments due or which may become due to contractor, 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 contractor within three clear days after the notice shall have been given to the contractor in manner hereinafter mentioned requiring the contractor to observe or perform the same or shall use improper materials of workmanship in carrying on the works, or shall in the opinion of the employer not exercise such due diligence and make such progress as would enable the work to be completed within due time agreed upon, and shall fail to proceed to the satisfaction of the employer after three clear days notice requiring the contractor so to do shall have been given to the contractor as hereinafter mentioned or shall abandon the contract, then and in any of the said cases, the Bank may notwithstanding previous waiver determine the contract by a notice in writing to the effect as hereinafter mentioned, but without thereby effecting the powers of the employer of the obligations and liabilities of the contractor the whole of which shall continue in force as fully as if the contract, had not been so determine and as if the works subsequently executed by or on behalf of the contractor (without thereby creating any trust in favor of the contractor) further the employer or his agent, or servants, may enter upon and take possession of the work and all plants tools scaffolding sheds machinery, steam, and other power, utensils and materials lying upon premises or the adjoining lands or roads and sell the same as his own property or may employ the same by means of his own servants and workmen in carrying on and completing the works or by employing any other contractors or other persons or person to complete the works, and the contractor shall not in any way interrupt or do any act, matter or thing to prevent or hinder such other contractors or other persons or person employed from completing and finishing or using the materials and plants for the works when the works shall be completed, or as soon thereafter as conveniently may be the employer shall give notice in writing to the contractor to remove his surplus materials and plants and should the contractor to remove his surplus materials after receipt by him the employer may sell the same by Public Auction and shall give credit to the contractor for the amount so realized. Any expenses or losses incurred by the contractor for the amount so realized. Any expenses or losses incurred by the employer in getting the amount payable to the contractor by way of selling his tools and plants or due on account of work carried out by the contractor prior to engaging other contractors or against the Security Deposit.

33. ARBITRATION

All disputed 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 this contract or effect thereof or to the rights or liabilities of the

parties or arising out of or in relation thereto whether during or after determination foreclosure or breach of the contract (other than those in respect of which the decision of any person is by the contract expressed to be final and binding) shall after written notice by either party to the contract to the other of them and to the Employer hereinafter mentioned be referred for adjudication to a sole Arbitrator to be appointed as hereinafter provided.

For the purpose of appointing the sole Arbitrator referred to above, the Employer will send within thirty days of receipt of the notice, to the contractor a panel of three names of persons who shall be presently unconnected with the organization for which the work is executed from the following categories of Arbitrators":-

a. Retired High Court/Supreme Court judge who have experienced in handling Arbitration Cases.
b. Member of Council of Arbitrators
c. Fellow of the Institution of Engineers
d. Eminent Retired Chief Engineer from State/Central PWD/Public sector undertaking of good reputation and integrity
e. Fellow of Indian Institute of Architects

The contractor shall on receipt of the names as aforesaid, select any one of the persons name to be appointed as a sole Arbitrator and communicate his name to the Employer within thirty days of receipt of the names. The Employer shall thereupon without any delay appoint the said person as the Sole Arbitrator. If the contractor fails to communicate such selection as provided above within the period specified, the Competent Authority should make the selection and appoint the selected person as the Sole Arbitrator.

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

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

The work under the Contract shall, however, continue during the arbitration proceedings and no payment due or payable to the contractor 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 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 Warangal or Hyderabad as may be fixed by the Arbitrator in his Sole discretion.

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

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

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

34. WATER SUPPLY, TOILETS ETC.

The selected tenderer shall make his own arrangements at his own costs for the supply of approved quality water required for construction and for drinking purposes and shall provide at his costs all tubes, fittings and temporary plumbing works required and on completion of the works, shall remove all temporary appliances and make good any work disturbed for making such arrangements to the satisfaction of the Employer.

35. ELECTRIC POWER

The Contractor shall make his own arrangements for power and supply system for driving plant and machinery for the work and for lighting purpose at his own cost. The cost of running and maintenance of the plants are to be included in his tender prices. He shall pay all fees and charges legally demandable and include the same in his tendered rates and hold the Employer free from all such costs. As bank already secured electric power connection the contractor shall pay the power charges as per the usage.

36. MATERIAL HEAD LOAD

The Contractor shall make his own arrangements for Materials to be carried out by head load. The price quoted shall be inclusive of all the lead and lift of materials to various floors. No extra payment will be made by the Bank.

37. INSURANCE (CONTRACTOR'S ALL RISK POLICY)

Unless otherwise instructed the Contractor shall insure the works and keep them insured until the virtual completion of the contract against loss or damage (incl. third party) by fire and earthquake, flood, wars, storms etc. The insurance must be placed with a company approved by the Employer, in the joint names of the Employer and the Contractor (the name of former being placed first in the policy) for full amount of contract and for any further sum if called to do so by the Employer, the premium of such being allowed to the Contractor as an authorized extra.

The Contractor shall deposit the policy and receipt for premiums paid with the Employer within 21(twenty one) days from the date of issue of work order unless otherwise instructed. In default of the Contractor insuring as provided above, the Employer on his behalf may so insure and may deduct the premiums paid from any money due, or which may become due to the Contractor. The Contractor 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 Contractor in case of rebinding or reinstatement after fire shall be entitled to extension of time for completion as the Employer may deem fit.

SPECIAL CONDITIONS OF CONTRACT

1. DRAWINGS AND SPECIFICATIONS

The works shall be carried out to the entire satisfaction of the EMPLOYER and the Architect, in accordance with the signed drawings and specifications and such further drawings and details as may be provided by the Architect, and in accordance with such written instructions, directions and explanations as may from time to be given by the Architect, 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 Architect, and in the event of the Architects 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 Architect and the contractor fail to agree as to whether or to there is an extra, then, if the Architect 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 Architect'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 (Authorities notices, patent right and royalties) or by the Authorities of directions in drawing of the Architect as herein mentioned.

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

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 Architect on any point that he feels is vague or uncertain. No claim of damages or compensation will be entertained by the owner in such grounds.

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 Architect from time to time is to be carried out and completed in all its parts to the entire satisfaction of the Architect. 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 shall be approved by the Employer / Architect. The site Engineers shall not be removed from the site without the written consent of the Employer / Architect.

5. 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.

6. PROGRAMME OF WORKS

Contractor shall have to prepare and submit the CPM/PERT charges for Architect'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 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 / Architect 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 / Architect 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.

8. 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 / Architect . **No payment will be made for unfixed material.**

9. 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 equipments etc.

10. 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 Architect.

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

11. 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

a. 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.

b. 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

c. 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 Architects 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 Architect 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.

d. 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 Architect, the workmen's name) and materials employed at or before the end of the week following that in which the work has been executed.

The measurements and valuations in respect of the extra items of contract shall be completed within the 'period of final measurement' or with in three months of the completion of the contract works as defined under Clause No. XV (Certificate of Virtual Completion)

12. EXTRA ITEMS RATES

The work or extra items shall be started only after the approval of extra items rates by client / Architect. 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 10 % for profit.

13. ARCHITECT'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 Architects 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. Incase of other drawing is required by the contractor he will give a minimum ten days notice to the Employer / Architect.

14. FAILURE BY CONTRACTOR COMPLY WITH ARCHITECT INSTRUCTIONS

If the contractor after receipt of written notice from the architect requiring compliance with such further drawings and / or Architects instruction, fails within seven days to comply with the same, the Employer / Architect 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 Architect as a debit or may be deducted by him from any money due or which become due to the Contractors.

15. INFORMATION TO BE SUPPLIED BY THE CONTRACTOR

a. The contractor shall furnish the Employer / Architect the following:
b. Detailed industrial statistics regarding the labor employed by him etc
c. The Power of Attorney, name and signature of his authorized representative who will be in charges for the execution of work
d. The 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.

16. ARCHITECT'S DELAY IN PROGRESS

The Architect 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.

17. 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 Architect to the contractor on account of the works executed by the contractor when in the opinion of the Architect, 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 / Architect) 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 Architect shall have certified in writing that they have been completed, the contractor shall be paid in accordance with the Certificate issued by the Architect 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 Architect 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 Architect 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 world have disclosed. No certificate of the Architect shall of

itself be conclusive evidence that any works and materials to which it relates are in accordance with the contract.

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

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

Payment upon the Architect'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.

18. DELAYED PAYMENTS

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

19. 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 such force majeure conditions as aforesaid shall not be regarded as a breach of the provision of this Agreement.

20. INCOME-TAX

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

21. SITE MEETINGS

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

22. ACTION WHERE THERE IS NO SPECIFICATION

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

23. 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.

24. TYPOGRAPHICAL CLERICAL ERRORS

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

25. 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 repay 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.

26. 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.

FORM OF AGREEMENT

ARTICLES of AGREEMENT made this _____ day of _____ year 2024 between the APGVB Head office, Warangal (Hereinafter referred to as the "Employer / Owner" which expression shall, unless excluded by or repugnant to the context, includes its successors and assigns) of the ONE PART and _____ of _____(Hereinafter referred to as "Contractor" unless excluded by or repugnant to the context, includes its successors and assigns) of the OTHER PART. **WHEREAS the Employer intends to carry out** PROPOSED CONSTRUCTION OF BANKS OWN BUILDING BRANCH AND REGIONAL OFFICE CONSISTING OF (GROUND FLOOR) COMPRISING OF CIVIL, SANITRAY, WATER SUPPLY, OF ANDHRA PRADESH GRAMEENA VIKAS BANK IN H.NO 1-44 &1-45 SITUATED IN AKUTHOTAPALLY VILLAGE, AMANGAL MANDAL, RANGA REDDY DISTRICT, TELANGANA (Herein referred to as "Project"). AND WHEREAS the Employer in order to effectively carry out the said works has engaged M/s. ABHIKRAM-S (Hereinafter referred to as "Architects") to prepare plans, drawings and specifications describing the works to be executed by the contractors for the project, to open tenders received at the office of the Employer, to scrutinize and recommend to the Employer the name(s) of the Contractor(s) from whom tenders were received and recommended to the Employer for the issue of work order to the contractor.

AND WHEREAS for the purpose of the said project, the Employer invited sealed tenders from experienced, resourceful and bonafide contractors vide his Notice Inviting Tender (NO._____dated_____).

WHEREAS the contractor submitted his Tender Documents containing General Notes, General Conditions of the Contract, Technical Specifications and Schedule of Quantities etc. for the works, prepared with the assistance of Consultants (Hereinafter collectively referred to as the "said conditions"),duly signed on each page as a token of his acceptance of the same , along with requisite Earnest Money Deposit of Rs._____(Copy enclosed Vide Annexure-1).

AND WHEREAS out of the Tenders received, the Tender of the contractor was found to be most suitable for the project.

AND WHEREAS the Architect has accordingly recommended to the employer for issue of work order to the contractor subject to his furnishing the requisite Security Deposit (Copy enclosed Vide Annexure-II).

AND WHERE AS the employer has issued the Work Order (No._____ dated._____) to the contractor.

AND WHEREAS the Contractor has accepted the aforesaid Work Order vide his letter of acceptance NO._____dt._____(Copy enclosed Vide Annexure III) and has also deposited with the Employer a sum of Rs._____ which with the Earnest Money of RS._____ forms the requisite Security Deposit @ 1 % of the accepted Tender Value of Rs._____.

AND WHEREAS the Employer has caused the plans, drawings, specifications, schedule of quantities etc. relating to the project at the work site at to be issued to the Contractor.

NOW , therefore, it is hereby agreed to and between the parties as follows:

1) Contract documents

The following documents shall constitute the Contract Documents.

I. This Article of Agreement.

II. Tender submitted by the Contractor included the N.I.T and Tender Documents(Vide Annexure-I).

III. All correspondence between the Bank/Architects and the Contractor from the date of issue of N.I.T and the date of issue of work order.

IV. Work order No._____dt._____(Vide Annexure-II).

2) In consideration of the payments to be made to the Contractor as hereinafter provided the Contractor shall upon and subject to the said conditions, execute and complete the contracted works shown upon the said drawings etc. and such further detailed drawings as may be furnished to the contractor by the said Owner/Employer through the Architects and described in the said Specifications and the said Schedule of Quantities.

3) Notwithstanding what are stated in the N.I.T conditions of Tendering, Conditions of Contract of herein before stated by the Employer through the Architects, reserves itself the right of altering the drawings and the nature of the work and addition to or omitting any items of work or of having portions of same carried out departmentally or otherwise and such alterations or variations shall be carried out without prejudice to this contract.

4) As mentioned in Article 1 above, the said conditions shall be read and be treated as forming part of this agreement and parties hereto will respectively be bound thereby and to abide by and submit themselves to the conditions and stipulations and perform the same on their parts to be respectively observed and preferred.

5) Any dispute arising under this agreement shall be referred to the Arbitration in a manner specified in the General Conditions of the Contract and all legal disputes shall be limited within the territorial jurisdiction of the Hyderabad thereto. The decision of the arbitration shall be final and binding on both the parties.

IN WITNESS WHEREOF THE PARTIES in their present have hereunder set and subscribed their hands, the day, month and year first above written.

Signed and delivered for and on behalf of
APGVB
Shri._____
_____
Its duly authorized official
In the presence of –

1. (Name and Address)

2. (Name and Address)

Signed and delivered for and on behalf of The Contractor _____by
Shri_____his Duly authorized official In the presence of –

1. (Name and Address)

2. (Name and Address)

14.0 TECHNICAL SPECIFICATIONS

This specification establishes and defines the requirements of various materials to be used in Civil and Structural works.

Whenever any reference to IS Codes is made, the same shall be taken as the latest revision (with all amendments issued thereto) as on the date of submission of the bid.

Apart from the IS Codes mentioned in particular in the various clauses of this specification, all other relevant codes related to specific job under consideration regarding quality, tests, testing and/ or inspection procedures shall be applicable. Reference to some of the Codes in the various clauses of this specification does not limit or restrict the scope of applicability of other referred or relevant codes.

In case of any variation / contradiction between the provision of I.S. Codes and this specification, the provision given in this specification shall be followed.

All materials shall be of standard quality and shall be procured from renowned sources / manufactures approved by the Engineer-in-Charge. It shall be the responsibility of the Contractor, to get all materials / manufactures approved by the Engineer-in-Charge for his approval. If so desired by the Engineer-in-Charge, tests shall be conducted in the presence of the Engineer-in-Charge or his authorized nominee.

Quality and acceptability of materials not covered under this specification shall be governed-by the relevant I.S.Codes. In case IS code is not available for the particular-material, other codes e.g.-B.S. or DIN or API/ASTM shall be considered. The decision of Engineer-in-Charge, in this regard, shall be final and binding on the Contractor.

Whenever asked for, the Contractor shall submit representative samples of materials to the Engineer-in-Charge for his inspection and approval. Approval of any sample does not necessarily exempt the Contractor from submitting necessary test reports for through approved material as per the specification /relevant IS Codes.

The Contractor shall submit manufacturer's test reports on quality and suitability of any material procured-from them and their recommendation on storage, application, workmanship etc. for the intended use. Submission of manufacturer's test reports does not restrict the Engineer-in-Charge from asking fresh test results from an approved laboratory of the actual material supplied from an approved manufactures/source at any stage of execution of work.

All costs relating to or arising out of carrying out the tests and submission of test reports and or samples to the Engineer-in-Charge for his approval during the entire tenure of the work shall be borne by the contractor and included in the quoted rates.

Materials for approval shall be separately stored and marked, as directed by the Engineer-in-Charge and shall not be used in the works till these are approved.

All rejected materials shall be immediately removed from the site by the contractor at his own cost.

SUBHEAD - EXCAVATION EARTH WORK AND ANTI-TERMITE TREATMENT

14.1 General

The work to be done under this subhead comprises of supply of all labour, plant materials and other performance of all work necessary for excavation with necessary close timbering, strutting, shoring and bailing/pumping out water including disposing of all surplus excavated material from the site as directed by Engineer in charge / Architect .

14.2 Site Clearance: Before the start of work, the area of the plot shall be cleared of all shrubs, vegetation, grass, bush wood, shrubs etc. All the building shall be laid out to ensure that the layout plan fits at site. After completion of the work, the entire area of the plot shall be cleared from all debris, unwanted materials and level/slope of ground as required at site upto peripheral roads, The debris and unwanted material shall be disposed off away from site without extra cost .

14.3 Site Levels : After site clearance and before commencement of excavation or filling, the Contractor shall take levels at 3.0 mtr. intervals in either directions or at lesser intervals as considered necessary at site for the entire plot. A record of these levels shall be signed jointly by Contractor, Engineer in charge and Architect. These records shall be kept by the Engineer in charge.

14.4 Setting out of works: The Contractor shall set out the works and shall provide and fix all setting out apparatus required and solely be responsible for the true and perfect setting out the same and for the correctness of the position, levels, dimensions and alignment of all buildings as per the drawings. The contractor shall take in writing the approval of the Engineer in charge/ Architect for setting out and levels before starting the works. These approvals shall be recorded in the stage passing register and signed by the Architect and contractor and countersigned by the Engineer in charge.

14.5 Surface Excavation : The surface area to be occupied by the building shall be cleared of all debris, shrubs and plants, grass all round the building including ramps if any. All roots and organic material shall be cleared from the filling area inside the building.

14.6 Precious objects, Relics and Antiquities

All precious metals, precious stones, coins, treasure trove, relics, antiquities minerals ; archeological and other finds of historical importance felled trees, other usable materials of any description and the like found in or upon the site shall be the property of the Employer and deliver the same to such person or persons as the Employer may from time to time authorize or appoint to receive the same.

14.7 Classification

All materials to be excavated shall be classified by the Engineer-in-charge into one of the following classes and shall be paid for at the rates quoted for such particular class of material. No distinction shall be made between materials that are dry, moist or wet. The decision of the Engineer-in-charge regarding the classification of the material shall be final and binding on Contractor and may not be opened up or reviewed or amended in any arbitration:

14.7.1 Ordinary and Hard soils

These shall include all kinds of soils containing kankar, sand, silt, murum and/or shingle , gravel, clay, loam, peat, ash, shale and the like which can generally be excavated by spade, pick axe and shovel and which is not classified under " soft and decomposed rock" and/or " hard rock" as defined below. This classification, however, shall include embedded rock boulders not longer than 1(one) metre in any direction and not more than 200mm in either one of the other two directions.

14.7.2 Soft and Decomposed Rock.

These shall include rock, boulders, slag, chalk, slate, hard mica schist, laterite, old lime or masonry foundations and the like and which in the opinion of the Engineer-in-Charge comprise rock, but which do not need blasting and can be removed with picks, hammer, crow bars, wedges and pneumatic breaking equipment. The fact that the contractor resorts to blasting for his own purposes shall not qualify the excavated material for classification under "head rock" as defined below. This classification shall also include excavation in macadam and tarred roads and pavements, rock boulders not longer than 1(one) meter in any direction and not more than 500m in anyone of the other two directions and random rubble of any type, thickness, size, shape or any masonry to be dismantled.

14.7.3 Hard Rock

This shall include all rock occurring in large continuous that cannot be removed except by blasting. No blasting shall be permitted without the prior written consent of the Engineer-in-Charge. Harder varieties of rock with or without varies and secondary minerals, which in the opinion of the Engineer-in-Charge require blasting, shall be considered as hard rock. Boulders of rock occurring in such sizes and not classified under either (a) or (b) above shall also be classified as hard rock. This classification shall also include both reinforced and un-reinforced concrete to be broken out unless separate provision in the bill of Quantities. The Engineer-in-charge may direct in certain, extreme cases that rock be excavated by heating and sudden quenching for splitting. Removal of rock using these process shall be paid for at the same rates as for blasting.

14.8 Excavation in Trenches

a) Earth work in excavation in any type of soil as existing at site for foundations of columns and walls shall be carried out as indicated on drawings.

b) The finished floor level of Stilt floor shall be fixed at site by the Engineer-in-Charge and Architect. The work shall be executed at site as per levels shown on drawings / approved by the Engineer-in-Charge / Architect.

c) Immediately after the execution of the foundation work and before covering the same the record of the following levels as actually executed at site separately for each block / other building shall be recorded in the measurement books and jointly signed and dated by the Engineer-in-Charge and Contractor.

(i) Existing ground level.
(ii) Level of bottom of lean concrete, under footings of columns and walls.
(iii) Finished flooring level of academic area and ground floor residential units.

d) If Trenches or foundations are excavations beyond the specified dimensions due to bad workmanship of contractor, the extra excavation shall be filled with lean concrete 1:4:8, cement: 4 coarse sand: 8 graded stone aggregate of 40mm nominal size) by the contractor without any extra cost to Employer.

14.9 Excavation over Areas:

Excavation over areas shall be carried out to the required depths and profiles for which suitable arrangements shall be made by the Contractor. The sides of the trench shall be kept vertical upto a depth of 2 mtr. from the bottom. For a greater depth, the excavation profiles shall be widened by allowing steps of 50 cm on either side after every 2 mtr. from the bottom. Alternately the excavation can be done so as to give slopes of 1:4. Where the soil is soft, loose or slushy, the width of steps shall be suitably increased or side sloped or the soil shored up as directed by Engineer in charge. It shall be the responsibility of the Contractor to take complete instructions in writing from

Architect/Employer regarding the stepping, sloping or shoring to be done for excavation deeper than 2 mtr.

14.10 Stips :

The Contractor shall take all neccessary precautions to prevent slips in excavation and shall at his own expense make good any damage or defect and remove top soil dumps and any surplus material caused by slips.

14.11 Plinth Filling & outside area filling

a) Earth obtained from excavation or approved earth brought from outside for extra payment shall be filled in layers not more than 20 cm. in depth at a time, spread, leveled, watered and well consolidated around foundations, under floors and other locations. The earth used for filling shall be free from all grass, roots debris etc.

b) Testing of filling layers : After compaction of each layer, samples shall be taken from the compacted layer and tested for dry density as per IS practice. The next layer of filling shall not be permitted to be deposited until the Engineer-in-Charge / Architect is satisfied that the previous layer has acheived required compaction. the contractor shall inform the Engineer-in-Charge / Architect in writing for inspection after filling and completion of each layer.if any particular layer fails to meet the required compaction, it shall be recompacted as directed by the Engineer-in Charge / Architect and fresh samples shall be taken to ascertain the compaction density. such recompaction shall be continued till the desired compaction(90%) is acheived.

14.12 Sand Filling: Sand shall be of approved grade and free from dust, organis and foreign matters. fine sand filling under floors shall be of specified thickness as shown on drawing. These shall be dry River fine sand watered and consolidated including dressing and levelling.

14.13 Disposal of Surplus Soil/Material: Surplus soil/earth if any, shall be disposed off with in the site of APGVB as directed by the Engineer in charge/ Architect. The same shall be spread out evenly. All excavated material not so used shall only be disposed of in areas approved by the Engineer in charge/ Architect.

14.14 Anti-termite Treatment

a) This shall be provided to bottom of trenches sides, including treating the back fill, under floors and other locations as specified in IS-6313 Part II for pre construction soil treatment with any of the followings:

CHEMICAL	**CONCENTRATION BY WEIGHT PERCENT**
(i) Chloropyrophos emulsifiable concentrates to IS 8944-1978	20

(b) The work of anti-termite treatment shall be got executed by a specialist firm which must be member of IPCA and approved by the Engineer in charge/ Architect and shall be carried out as per IS 6313 Part I & II of 1981 for pre-construction soil treatment. The firm shall render a ten year guarantee to the employer through the contractor who will be the principal guarantor. The period of ten year shall be reckoned from the date of completion of work as in completion certificate. The contractor should store the total required consumption of chemical at site within 7 days of the start up of the work. The contractor shall stock all old used drums/cans till the completion of the project.

c) Such guarantee shall be directly given by the specialist agency to the employer through the contractor in the form approved by the employer. In the event of reinfestation at any time during

guarantee period, the specialist agency shall undertake such treatment as may be necessary to render the structure free from termite infestation including breaking and reinstalling any other work that may be necessary for the treatment at no extra cost.

d) Time of Application
Soil treatment should start when foundation trenches and pits are ready to take mass concrete in foundations. Laying of mass concrete should start when the chemical emulsion has been absorbed by the soil and the surface is quite dry. Treatment should not be carried out when it is raining or when the soil is wet with rain or sub-soil water. The foregoing applies also in the case of treatment to the filled earth surface within the plinth area before laying the sub-grade for the floor.

e) Termite Mound Treatment
If termite mounds are found within the plinth area, these shall be destroyed by breaking open the Earthern structure, making holes with crowbars and pouring into the mound, at several places approximately 4 litres of emulsion per cubic metre of mound.

f) Treatment of column pits, foundations, treches and basement excavations.

The bottom surface and the sides (upto a height of 300mm above concrete foundation level) of the excavations for column pits, wall trenches and basements shall be treated with the chemical at the rate of 5 litres per square metre of surface area. after constructing the column foundation and retaining walls of the basement, the back fill in immediate contact with the

(i) the proposed program, methods and details of plant and equipment to be used for / batching and mixing of concrete.
(ii)

c) Reports for Inspection and Testing
During concreting operations, the Contractor shall conduct inspection and testing and all reports thereon shall be submitted in summary form to the Engineer in charge/ Architect.

d) Schedules
The Contractor shall prepare working schedule for dates and rate of placing of concrete for each item of work and submit the same to the Engineer in charge/ Architect when requested.

14.15.3 Materials
Before bringing to the site, all materials for cement concrete shall be approved by the Engineer in charge/ Architect. All approved samples shall be deposited in the office of the Engineer in charge/ Architect. The Engineer in charge/ Architect shall have the option to have any of the material tested to find whether they are in accordance with specifications at the Contractor's expenses.

a) Cement : shall be ordinary Portland and shall be stored in a dry waterproof go down.

b) Fine Aggregate: For all concrete work, it shall be coarse sand conforming to the grading given below:- (Zone I or II only applicable to concrete). Silt content not to exceed 8% by volume. The grading of fine aggregate shall be within the limits given in the following table and shall be described as fine aggregate grading Zone I and II

IS Sieve Designation	Percentage Passing for	
	Grading Zone I	Grading Zone II
10mm	100	100
4.75mm	90-100	90-100

2.36mm	60-95	75-100
1.18mm	30-70	55-90
600 micron	15-34	35-59
300 micron	5-20	8-30
150 micron	0-10	0-10

(c) Coarse aggregate: For concrete it shall be crushed stone graded coarse aggregate. Grading shall be within the limits as given in the following table:-

(d) Coarse aggregate of all grades shall be from the crushers of approved source.

IS Sieve Designation	Percentage Passing for graded aggregate of Nominal size			
	40mm	20mm	16mm	12.5mm
80mm	100	-	-	-
63mm	-	100	-	-
40mm	95-100	100	-	-
20mm	30-70	95-100	100	100
16 mm	-	-	90-100	-
12.5mm	-	-	-	90-100
10mm	10-35	25-55	30-70	40-85
4.75mm	0-5	0-10	0-10	0-10
2.36mm	-	-	-	-

NOTE: If directed by Engineer in charge/ Architect, the aggregate (fine as well as coarse) shall be washed at Contractor's expense.

e)Broken Brick aggregate :- Broken brick aggregate shall be prepared from well burnt bricks. These shall be free from under burnt particles and adherent coating of soil or silt.

f) Water

Water used in construction for all civil & structural works shall be clean and free from injurious amount of oil, acid, alkalies, organic matters or other harmful substances which may be deletarios to concrete, masonry or steel.the ph value of water samples shall be not less than 6. potable water shall be considered satisfactory. under ground water can also be used with the prior approval of Engineer-in-Charge, if it meets all the requirements of IS:456

Tests on water samples shall be carried out in accordance with IS:3025 and they shall fulfill all the guidelines and requirements given in IS:456

The Engineer-in-Charge may require the contractor to prove, that the concrete prepared with water , proposed to be used, shall not have average 28 days compressive strength lower than 90% of the strength of concrete prepared with distilled water.

The Engineer-in-Charge may require the contractor to get the water tested from an approved loboratory before starting the construction work and in case the water contains any oil / organic matter or art excess of acid, alkalies or any injurious amount of salts etc., beyond level) of the excavations for column pits, wall trenches and basements shall be treated with the chemical at the rate of 5 litres per square metre of surface area.After constructing the column foundation and

retaining walls of the basement, the back fill in immediate contact with the foundation structure shall be treated at the rate of 15 litres per square metre of the vertical surface of the sub-structure for each side. if water is used for ramming the earth fill, the chemicaql treatement shall be carried out after ramming operation is completedby rodding the earth at 150ml11 c/c close to wall surface and spraying the chemical above dose. As earth is spilled layers the treatment shall be carried out in similar stages. The chemical emulsion shall be directed towards the concrete or masonry surfaces of the columns and walls so that the earth in contact with these surfaces is well treated with the chemicals. in the case of R.C.C framed structure with columns, plinth beams and R.C.C basements, the treatment shall start at the depth of 500mm below ground level. from this depth the back fill around the columns, beams and R.C.C basement wall shall be treated at the rate of 15 litres per square metre of vertical surface

g) Termite Proof Course or DPC In Plinth

If plinth level dump proof corse is provided, the termite proof course shall be located just below the level of the filled earth. The plinth surface should be treated at 5 litres per square metrs immediatly after the course is laid and the concrete is green.

If there is no provision of a damp proof course, the top surface of the masonry course just below the level of pinth filling mentioned above should be soaked with the chemical emulsion at the rate of 5 litres per square metre of the surface area. this application should be carried out slowly to enable the masonry surface to absorb the emulsion properly. Both steps (a)&(b) above help in creating a barrier which is impervious to termite entry.

h) Temite Treatment at junction Of Walls and Floor
Rodding shall be carried out along the junction of walls and earth filling at IS cm interval down to or slightly lower than the DPC or the chemical barrier described above. Emulsion shall be sprayed along the wall junction at 1 litre per linear metre so that it mixes intimately with the broken up soil and seeps to the DPC level or chemical barrier thus establishing continuity on the anti termite layer. the disturbed earth is then tampered back in place.

i) Treatment Of Top Surface Of Plinth Filling
after the plinth area earth filling is completed and before the rubble packing of sub grade is laid, the entire surface of the filled earth shall be treated with the chemical emulsion at the rate of 5 litres per square metres. Ligth rodding may be carried out in the soil surface to facilitate saturation of the soil with chemical emulsion.Where construction has advanced already for facility of construction, the treatment could also be done effectively, over the base concrete (lane mix) under the floor taking care that the emulsion, at the rate of 5 litres per square metre soak fully into the concrete.
the above application effectively prevents entry of termites throuth the floor structure.

j) Treatment of Soil along External Perimetre

Earth around the external perimetre of the building upto a depth of 30cm, shall be treated at the rate of 5 ;0 litre per running metre ot the external wall. To facilitate this treatment solid MS rods should be driven into soil as close as possible to the plinth wall at intervals of 15cm, and upto a depth of 30cm , and the rods move at backwards and forwards in a direction parallel to the wall to brake up the eaj 1h so that the emulsion mixes intimately with the soil.

K) spraying equipment

A pressure pump shall be used to carry out spraying operations to facilitate uniform spraying and penetration of chemical into the earth. The chemical concentration and dosage for horizantal and vertical surfaces are based on IS:6313 (Part II) code of practice for antitermite measures in building.

f)Measurement

Measurement for payment of pre-construction treatment as detailed above shall be for actual area covered by building at ground level on plan in square metre.

14.15 SUBHEAD - CONCRETE (PLAIN AND REINFORCED)

14.15.1 General

This subhead covers the requirements for furnishing of cement concrete including materials proportioning batching, mixing, testing, placing, compacting, finishing, jointing, curing and all other work as required for cast-in-place/plain cement concrete/RCC.

14.15.2 Submittals

a) Materials Reports
Prior to start of delivery of materials required for cement concrete the following shall be submitted by the Contractor to the Engineer in charge/ Architect for approval.

(i) Recommended suppliers and / or sources of all ingredients for making concrete including cement fine and coarse aggregates, Water and additives.

(ii) Quality Inspection Plan to ensure continuing quality control of ingredients by periodic sampling, testing and reporting to the Engineer in charge / Architect on the quality of materials being supplied.

b) Plant & Equipment

The Contractor shall submit the following to Engineer – in - charge / Architect well in any change in source of water, water samples shall be tested again to meet the specified requirements .
Water shall be stored in tin barrels, steel tanks or water-tight reservoirs made with bricks / storm or reinforced concrete, brick / stone masonry reservoirs shall have R.C.C base slab and shall be plastered inside, with one part of cement and four part of sand and finished with neat cement punning. These reservoirs shall be of sufficient capacity to meet the water requirement, at any stage of construction.Water for curing shall be of the same quality as used for concreting and masonry works.sea water shall not be used for preparation of cement mortar, concrete as well as for curing of the plain / reinforced concrete and masonry works. Sea water shall not be used for hydro testing and -checking the leakage of liquid retaining structures also.

g) Admixture & Additives

Chemically admixtures are not to be used until permitted by the Engineer in charge/ Architect in case their use is permitted, the type amount and method of use of any admixture proposed by the Contractor shall be submitted to the Engineer in charge/ Architect for approval.

14.15.4 Mixing : All cement concrete (plain or reinforced) shall be mixed in mechanical mixers.

14.15.5 Consolidation: Concrete for all reinforced concrete works in column footings, columns, beams, slabs and the like shall be deposited and well consolidated by vibrating, using portable mechanical vibrators. The rest of the concrete such as shelving etc. shall be deposited and well consolidated by pouring and tamping. Care shall be taken to ensure that concrete is not over vibrated so as to cause segregation.

14.15.6 Grade of Concrete :- The compressive strength of various grades of concrete shall be given as below:-

SL.NO.	GRADE DESIGNATION	COMPRESSIVE STRENGTH ON 15cm CUBES min.7 Days (N/mm2)	SPECIFIED CHARACTERISTICS COMPRESSIVE STRENGTH AT 28 Days (N/mm2)	MINIMUM CEMENT CONTENT (Kg.per Cub.mtr)	MAXIMUM WATER CEMENT RATIO
(i)	M-20	As Per Design	20	300	0.55
(ii)	M-25	As per Design	25	310	0.50
(iii)	M-30	As Per Design	30	320	0.45
(iv)	M-35	As Per Design	35	340	0.40

NOTE :-

i) In the designation of a Concrete mix letter M refers to the mix and the number of the specified characteristic compressive strength of 15 cm – cube at 28 days expressed in N/mm2.

ii) It is specifically highlighted that in addition to the above requirements, the maximum cement content for any grade shall be limited to 500 kg/cubic metre. The limitations shall apply to all types of cements of all strengths.

iii) The minimum cement content for design mix concrete shall be maintained as per the quantity mentioned above. Even in the case where the quantity of cement required is higher than the minimum specified above to achieve desired strength based on an approved mix design, nothing extra for extra cement used shall become payable to the contractor.

14.15.6.1 The first concrete mix design / laboratory tests, with admixture will be carried out by the contractor through any one of the reputed laboratories /Test houses.

14.15.6.2 The contractor shall submit the report on design mix from any of above approved laboratories for approval fo Engineer-in-Charge within 30days from the date of issue of letter of acceptance of the tender No. concretign shall be done until the design mix is approved. In case of white Portland cement and the likely use of admixtures in concrete with ordinary Portland cement, the contractor shall design and test the concrete mix by using trial mixes with white cement and / or admixtures also, for which nothing extra shall be payable.

14.15.6.3 In case of change of source or characteristic properties of the ingredients used in the concrete mix during the work, a revised laboratory mix design report conducted at laboratory established at site shall be submitted by the contractor as per the direction of the Engineer-in-charge.

14.15.6.4 All cost of mix designing and testing connected therewith including charges payable to the laboratory shall be borne by the contractor.

14.15.6.5 Batching and Laying :

a) Ready Mix Concrete (RMC) obtained from the automatic batching plant shall be used . Transit mixtures shall transport the concrete to site . All the precautions shall be taken during the transportation and handling of concrete has to get the approval from Engineer-in-Charge regarding source of ready mix concrete. Nothing extra on account of R.M.C & its transportation at site of work shall be paid.

b) the concrete shall be placed in position using tower crane or concrete pumps of adequate capacity to lift upto machine room level. use of mechanical hoists shall not not be permitted for lifting of concrete to various levels. For pumping of concrete the design of concrete mix shall be done seprately. Nothing extra for laying concrete using concrete pumps or for extra concrete mix. design shall be paid. in other words, charges of carrying out concrete mix re-design due to change of source of raw material or re-design for pumpable concrete etc. shall not be paid.

14.15.6.6 All other operations in concreting work light mixing, slump, laying, placing of concrete, compaction, curingetc. shall be as per latest IS codes.

14.15.6.7 Test specimen, Frequency of sampling, test results of samples, lot size, standard of acceptance:-

14.15.6.8 The contractor has two arrange at site the centering and shuttering for 1700 Sqm. Before start of work. Only M.S centring / shuttering and scaffolding material unless and other wise specified shall be used for all R.C.C work to give an even finish of concrete surface. However, marine - ply shuttering in exceptional cases as per site requirement may be used on specific request from contractor as approved by the Engineer-in-Charge.Nothing extra shall be paid for the centring and shuttering circular in shape when ever the form work is having a mean radius exceeding 6m in plan.

14.15.6.9 In order to keep the floor finish as per architectural drawings and to provide required thickness of the flooring as per specifications, the level of top surface of R.C.C shall be accordingly adjusted at the time of his centring, shuttering and casting for which nothing extra shall be paid to the contractor.

14.15.6.10 As per general Engineering practice, level of floors in toilet / bath , balconies, shall be kept 12 to 20 mm a requird lower than the general floors shuttering should be adjusted accordingly, Nothing extra is payable on this account.

14.15.6.11 in respect of all projected slabs at all levels including cantilever, canopy, the payment for the R.C.C work shall be made under the item R.C.C slabs. The payment for shuttering shall be made under item of centering and shuttering for R.C.C slabs. Nothing extra shall be paid for the site shuttering at the edge of these projected balconies and projected varandah slabs.

14.15.6.12 Nothing extra shall be paid for providing drip course or moulding in the R.C.C projected surfaces whenever required.

14.15.6.13 Nothing extra shall be paid for laying in slanting position of centring, shuttering, reinforcement and R.C.C work for the slabs and beams of sloping roofs.

14.16 Form Work

General : The steel / Plywood from work shall be designed and constructed to the shapes, line and , dimensions shown on the drawings. All forms shall be sufficiently water tight to prevent leakage of mortar. Fonus shall be constructed in such a way so that it can be removed easily with out disturbing the structure.Maximum height of column for which concrete can be placed at a time shall not be more than 1.5mtr. Floor height upto 3.66111 shal be considered as one floor.

14.17 Props may be hard wood / steel. Timber used in centring and props should be suitable and strong. Pre moulded cement cubes or plastic blocks will be planned betwen form work and reinforced cement to acheive uniform cover of concrete.

14.18 Cleaning and Treatment of Forms : All rubbish , particularly chippings , shavings and saw dust, shall be removed from the interior of the forms (steel / ply) before the concrete is placed the form work in contact with the concrete shall be cleaned and thoroughly wetted or treated with an approved composition to prevent adhesion.betwen form work ancl concrete. Care shall be taken that such approved composition is kept out of contact with the reinforcement.

14.19 Verticality of Frame Structure : All the columns of the frame will be checked for plumb by plumb-bob as well as by the theodolite as the work proceeds to upper floors. Internal columns will by taking measurements from outer row of columns for their exact position.

14.20 Stripping Time : Form shall not be struck until the concrete has attained a strength at least twice the stress to which the concrete may be subjected at the time of removal of form work. The strength reffered to shall be that of concrete using the same cemnt and aggregates with the same proportions and cured under conditions of temperature and moisture simila to those existing on the work. Where so required form work shall be left longer in normal circumstances and where ordinary portland cement is used, forms may generally be removed after the expiry of the following periods.

a) Walls, columns and vertical faces of all structural members	2 days
b) Removal of props under slabs :	
(i) Spanning upto 4.5 mtr.	7 days
(ii) Spanning over 4.5 mtr.	14 days
c) Removal of props under beams :	
(i) Spanning upto 6.0 mtr.	14 days
(ii) Spanning over 6.0 mtr.	21 days

d) In case of cold weather the periods may be increased at the discretion of the Engineer-in-Charge / Architect. For other cement (like pozzolona etc) stripping time recommended for ordinary portable cement may be suitabily modified. The number of props left under, their size and disposition shall be such as to be able safely carry full dead load of the slab beam or arch, as the case may be together with any live load likely to occur during placing of concrete, curing or further construction.

14.21 Removal of Form work : Form work shall be removed in such a manner as would not cause any shock or vibration that would damage the concrete. Before removal of surface and props, concrete surface shall be exposed to ascertain that the concrete has sufficiently hardened.

14.22 where the shape of element is such that from work as re-entrant angles, the form work shall be reoved as soon as possible after the concrete has to avoid shrinkage cracking occuring due to the restraint imposed.

14.23 Finish to Concrete Work

a) All concrete while placing against form work shall be worked with vibrators rods and trowels as required so that good quality concrete is obtained.

b) All exposed surface of R.C.C lintels, beams, columns etc. shall be plastered to match with adjoining plastered face of walls after suitable hacking the concrete surface.

c) All surface of R.C.C slabs loft for cup board slab, shelves and working platform in kitchen etc. and othe exposed surface of R.C.C work continous to brick work shall be plastered (12mm thick) with cement mortar 1:4 (1cement : 4 fine sand) to given an even and smooth surface.

d) The top of loft slabs and shelves shall be smooth finished while the concrete is green with a flooring coat of neat cement to give a smootha and even surface.The exposed front face shall be finished in cement plaster 1:4 (1 cement : 4 is coarse sand) to bring it in line and level and finished i neat cement. such thin slabs shall be carefully cast so that they can be finished within their specified thickness. Additional thickness of plaster which makes this elements look unneccesarily heavy will be not allowed.

e) chicken wire mesh 24 guage and 200101 mesh will be provided all along R.C.C surface adjoining brick work giving 1500101 laping on either side using nails etc.for fixing mesh while plastering.

f) the rate shall be deemed to include for chicken wire mesh as given above and incidental labour such as chamfer splays, rounded or curved agles, grooves, rebate and with moulds / courses.

14.24 Sampling and Testing of Concretes :

Samples from fresh concrete shall be taken as per IS-456-2000 (sampling and testing of strength of concrete) and cubes shall be made, cured and tested at 7th and 28days. for testing cement concrete the contractor shall arrange for all the tools / moulds for making neccessary cubes and shall bear all the charges for making the cubes, curing and testing through an approved laboratory. Further the contractor shall make available laboratory equipment at site. A temporary room of adequate size having these facilities shall be constructed by the contractor it is expense. after completion of work the contractor shall remove the equipment, dismantle the room and clear the site.

14.25 Compressive strength test at 7 days may be carried out in addition to 28 days compressive strength test for o quicker idea of the quality of concrete. in all cases the 28 days, compressive strength alone shall be the criteria for the acceptance or rejection of the concrete.

14.26 Test Specimen: Three test specimens shall be made from each sample for testing at 28 days. Additional cubes may be required for such purposes as to determine the strength of concrete at 7 days or to check the testing error.

14.27 Test strength of samples: The test strength of the sample shall be the average of the strength of three specimen. The individual variation shall not be more than ± 15 percent of the average.

LOT SIZE :-

The minimum frequency of sampling of concrete of each grade shall be in accordance with the following :-

QUANTITY OF CONCRETE IN THE WORK (CUBIC METRE PER DAY)	NUMBER OF SAMPLES
1 - 5	1
6 - 15	2
16 – 30	3
31 – 50	4
51 & above	4 Plus one additional sample for each additional 50 cubic metre of part thereof.

NOTE : At least one sample shall be taken from each shift.

14.28 Mix of cement concrete/reinforced cement concrete required to be used in various locations/ situations shall be shown on drawing. Wherever not mentioned shall be as under :-

(a)Cement concrete in floors (self finished) and concrete as under layer for terrazzo floor cast in situ shall be PCC 1:2:4 (1 cement: 2 coarse aggregate : 4 graded stone aggregate 12:5 nominal size).

(b)Cement concrete for RCC work in wall, columns footings, beams/Roof/floor slabs, landing, fins, lintels, chajjas, shelves, staircases, balconies, Loft slabs shall be of M20 Grade mix cement concrete and in Pedestals and Columns shall be of M25 Grade mix cement concrete

(c)Cement concrete in PCC filling for pressed steel frames, hold fast blocks and rain water pipes etc. shall be 1:3:6 (1 cement :3 of coarse sand: 6 stone aggregate 20 mm nominal size).

(d)The mix (1:2:4) shall conform to M 15 (nominal) and mix (1:1.5:3) shall conform to M 20 (nominal) as per IS 456-2000 for the purpose of testing and acceptance based on 28 days strength.

(f)Lean cement concrete below columns/walls footings and in sub flooring of stilt floor shall be of mix 1:4:8 (1 cement : 4 coarse sand : 8 stone aggregate 40 mm nominal size).

14.29 Bearing Plaster

This shall consist of cement plaster 1:3 (1 cement :3 fine sand) 20mm thick finished with a coat of neat cement laid on top of walls as bearing for RCC lintels, beams and slabs, when dry, a thick coat of lime wash shall be given before starting, shuttering. The shuttering shall be started after minimum one day of bearing plaster so that it is set.

14.30 Concrete filling for sunken and lowered portions of slab: This shall be cement concrete 1:5:10 (1 cement : 5 coarse sand: 10 brick ballast 40mm nominal size) in the entire sunken portions or cinder filling as per specifications shall be provided.

14.31 Damp Proof Course:

(a) This shall consist of 40mm thick PCC 1:2:4 (1 cement: 2 coarse sand :4 graded stone aggregate :12.5mm nominal size) with water proof compound confirming to IS-2645) as per manufacturer's specifications.

(b)DPC as specified above shall be provided 40mm thick at level with finish floor to the full width of walls (Ground floor only).

(c) No DPC shall be provided over dwarf walls but floors shall be carried over to the full width over the dwarf wall finished 10mm projecting over from the wall.

(d) The dried up surface of DPC shall be cleared with brushes and finally with the piece of cloth soaked in kerosene oil and then applied with hot bitumen using 1.7 Kg. per sqm. of DPC area.

(e) Vertical Damp proof course shall be provided at ground floor on common walls between floors at different levels and shall consist of 20mm thick plaster of mix 1:4 (1 cement: 4 coarse sand) with water proofing compound as per manufacturers specification and as in (d) above before filling earth/sand is carried out.

14.32 Plinth Protection

PCC 1:3:6 (1 cement: 3 coarse sand: 6 graded stone aggregate 20mm nominal size) 50mm thick of width as shown on drawing shall be provided and laid in alternate bays in slope over 75mm hard core of rammed dry brick aggregates of 40mm nominal size over well rammed and consolidated earth base with brick edging all around the buildings except in portions covered by steps, ramps and platforms. A joint of 10mm shall be left through depth of concrete all along with junction between wall and plinth protection at all turnings and across at every 2.5m. these joints shall be filled with a mixture of blown grade Bitumen 85/25 and sand. The surface shall be finished smooth without using extra cement. Brick edging shall be laid on header with cement mortar 1:4 (1 cement:4 Coarse sand) as per detail as shown on drawings.

14.33 SUB HEAD - BRICK WORK

14.33.1 MATERIAL

14.33.1.1 Sand for Masonary Mortars: Unless otherwise indicated, sand for masonry mortars shall consist of natural river sand (generally termed as coarse sand) conforming to IS 2116-1965 specifications for sand for masonry mortars. Sand shall be hard, durable, clean and free from adherent coatings and impurities such as iron particles, alkalis, salts, coal, mica, shale or similar laminated or other materials exceeding the specified limit. Grading of sand shall be as under :

IS Sieve	Percentage Passing by weight Un reinforced masonry	Reinforced masonry
4.75mm	100	100
2.36mm	90-100	90-100
1.18mm	70-100	70-100
600 micron	40-100	40-100
300 micron	5-70	5-70
150 micron	0-75	0-10

14.33.1.2 The maximum quantities of clay, fine silt and fine dust in sand shall not be more than 8 percent by volume, Organic impurities shall be below that obtained by comparison the standard solution on specified in 6-2-2 of IS 2386 (Part II 1983). The coarse/fine sand shall be from river Krishna or from any other source conforming to the above standards.

14.33.1.3 Common Burnt clay building brick : Common burnt clay building bricks (herein-after termed as bricks shall conform to the requirements laid down in IS-1077-1976 for common burnt clay building bricks. Bricks shall be class designation 75, sub Class ‘A’ as per parameters given in the IS regarding edges, dimensions etc. The overall dimensions shall however be as per local practice of moulds. Water absorption after immersion in cold water for 24 hours shall not exceed 20% and grading for efflorescence shall be less than moderate. Bricks shall be free from cracks, flaws and nodules of free lime. Dimension shall be all within tolerance. Under/over burnt bricks and warped bricks shall be totally rejected.

14.33.1.4 Test check on random samples from each lot of bricks brought at site shall be carried out for compressive strength and water absorption test. Results of these tests duly signed and dated by Contractor; Architect and Engineer in charge shall be recorded in a separate register, which shall be kept with the Engineer in charge.

WORKMANSHIP - MASONRY MORTARS

14.33.2 Preparation of Cement Mortars: Mortar shall be of mix as indicated. The mixing specified is by volume. Mixing shall be done in a mechanical mixer. The mortar shall be mixed at least three times after adding of water. The cement mortar shall be freshly mixed for immediate use. Any mortar which has commenced to set shall be discarded and removed from the site.
14.33.3 Bond : All brick works shall be built in English bond, unless otherwise indicated. Half brick walls shall be built in stretcher bond. Header bond shall be used for walls curve on plan for better alignment, header bond shall also be used in foundation, stretchers may be used when the thickness of wall renders use of header impracticable. Where the thickness of footings is uniform or a number of courses, the top course of the footings shall be of headers. Brick courses at DPC level and at all slab levels below the bearings of slab shall be as bricks on edges.

14.33.4 Half or cut brick shall not be used except where it is necessary to complete the bond.

14.33.5 Overlap in stretcher bond is usually half brick and is obtained by commencing each alternate course with a half brick. The overlap in header bond which is equally half the width of the brick is obtained by introducing a three quarter brick in each alternate course at quoins. In general, the cross joints in any course of brick work shall not be nearer than a quarter of brick length from those in the course below or above it.

14.33.6 Curing: The bricks shall be adequately wet before use and brickwork shall be constantly kept wet for atleast seven days.

14.33.7 Half Brick Walls : The bricks shall be laid in stretcher bond in cement and sand mortar 1:4 (1 cement : 4 coarse sand) or as indicated. The reinforcement shall be 2 Nos. MS round bars or as indicated and as described in SUBHEAD VII steel and Ironwork. The diameter of bars shall be 6mm. The first layer of reinforcement shall be used at second course and then at every fourth course of brick work. The bars shall be properly anchored (min. 150mm) at their ends where the portions and or where these walls join with other walls columns. The inland steel reinforcement shall be completely embedded in mortar. Overlap in reinforcement if any, shall not be less than 30 cm. The cover i.e. the mortar interposed between the reinforcement bars and brick shall not be less than 6mm. The mortar covering in the direction of joints shall be not less than 15mm.

14.33.8 Brick work in foundation upto plinth: Brickwork in foundation shall be with brick of class designation 75 upto plinth level in cement mortar 1:6 (1 cement: 6 coarse sand).

14.33.9 Brick work in Super structure : Brickwork in superstructure including parapets shall be bricks of class designation 75 in cement mortar 1:6 (1 cement: 6 coarse sand).

14.33.10 Brick work in Steps of staircase : Brickwork in steps of staircase shall be in bricks of class designation 75 in cement mortar 1:6 (1 cement: 6 coarse sand).

14.33.11 Parapets and Railings : Parapets and railing shall be provided to balconies, Terraces, roof tops and stair landing etc. of upper floors as per details shown on drawings.

14.33.11 70mm Thick Brick Work
70mm thick brick work shall be provided with bricks of class designation 75 in cement mortar 1:3 (1 cement : 3 coarse sand) wherever shown in the drawings.

14.34 SUB HEAD - JOINERY WORKS

14.34.1 General
The type of shutters for doors, windows, ventilators etc. viz. paneled glazed wire gauzed and flush shall be as indicated and detailed in the drawing.

14.34.2 TIMBER:

a) Quality : Unless otherwise specified timber used in wood work shall be of approved quality from the species of wood listed in IS 399-1963.

b) Timber shall be well seasoned, proper dressed, of uniform colored and durability of reasonably straight grains and shall be free from knots, cracks, shakes, splits, cross grains ,decay and sapwood etc.

c) Teak Wood : Moisture content of timber used in wood work shall be as close as possible to the lower values laid down in the table below.

S.No.	Type of Wood work	Recommended range of moisture content (%)
1	Frames of doors and windows etc.	16 to 18 %
2	Shutters of doors and windows etc.	15 to 16 %
3	Frame work for ceiling, cladding etc.	16 to 18 %

14.34.3 Flush Door shutters: Door shutters shall be 35 mm thick craft master wooden moulded door having hard wood timber frame of 29 mm th. Core and door facing plates (wooden fiber plates) pasted on both sides with overall thickness of doors to be 35 mm. The core shall be solid core using machine filled rigid expanded polyurethene foam of density 45 kg / cubic meter. Minimum width of frame shall be 65 mm th with additional wooden blocks for fixing of locks etc. door facing plates shall be 3.2 mm th. Phenolic bonded passing the test as required vide IS 2380 and formaldehyde test as per IS and boil test as per is 4020. Water absorption should be less than 16% after 2 hours and less than 36% after 24 hours. Moister content should not be more than 8%.

14.34.4 Testing of Flush Door / Wooden Moulded Door Shutters: On receipt of the shutters at site the Engineer in charge APGVB or The Architect shall be entitled to get the samples of door shutters tested in any approved laboratory. From each lot of approximately 100 shutters, one shutter shall be selected at random by the Engineer in charge/ Architect. The cost of replacement of the door shutters selected as samples, their transportation to the laboratory and cost of testing by the laboratory shall be borne by the Contractor.

14.34.5 Glazed & Gauzed Door Shutters : Shutters shall be 35/40 mm thick. These shall consist of second class Teak wood styles, top, bottom and lock rails as per details shown on drawings. Timber to be used for these shutters shall be of good quality, seasoned of material growth and conforming to IS 4021-1963. Seasoning and ASCU treatment shall be done as per IS-402-1962. Styles and rails of shutters shall be in one piece only. Styles and rails shall be jointed to each other by tonen or mortice at right angles. Mountings and glazing bars shall have joints and shall be strub tennoed to the maximum depth which the size of member would permit.

14.34.6 Wire gauge shutters : Provisioning and fixing of 35mm thick wire gauge shutters to all openable windows is in the scope of work of this contract. Wire cloth shall be securely housed in rebates by giving a right angled bend and fixing by means of suitable staples at intervals of 75mm. Over this wooden bead of specified size shall be fixed with nails, or screws, where indicated to cover the rebate fully. The space between the beading and the rebate shall be filled with putty to give it a neat finish. Exposed edges of the beads shall be rounded.

14.34.7 Door and windows shutters shall be provided as per details shown on the drawings.

14.34.8 The bottom of door shutters shall be 5mm above the finished floor level.

14.34.9 The glass panes shall be free from flaws, specks or bubbles and shall have square corners and straight edges. The glass panes shall be so cut that it fits slightly loose in the frames. The glass

pane shall be fixed to the shutter with first glass hardwood beading of size as indicated properly screwed to the shutter with steel nails and necessary adhesive as per details as shown on drawings.

14.34.10 Glazing to windows/doors shutters shall be as follows of quality as approved by Engineer in charge and Architect.

(a)	Fan light of Doors shutters	:	5.5 mm thick plain sheet glass.
(b)	Door Shutters partly glaze	:	5.5mm thick plain sheet glass with itching.
(c)	Windows (openable & fixed)	:	5.5mm thick tinted glass.
(d)	Ventilators	:	5.5mm thick pin head glass.

14.34.11 Polishing and finishing: Polishing to all wood work is to be done with 3 to 4 coats of melamine polish, including the necessary pigments to get the proper colour and shade as by the Architect / Engineer in charge. Before polishing the base of wooden surface should be properly prepared by applying base primer and filling .The surface should be smoothened by applying sand paper on base. The polish work should be up to the satisfaction of Engineer in charge /Architect.

14.35 SUBHEAD – ALUMINIUM DOORS, WINDOWS & VENTILATORS.

14.35.1. The Aluminium extruded sections shall conform to Designation 63400 given in IS 737-1986 and shall be of manufacturers such as JINDAL or Hindalco or INDAL or equivalent manufacturers to be approved by the Engineer in charge/ Architect.

14.35.2. The Aluminium Doors, Windows, Ventilators and Glazing sections shall be anodized (anodic coating shall conform to IS 1868) As per colour approved by the Engineer in charge/ Architect .

14.35.3. The fabrication shall be carried out having mechanical joints, accurately machined and fitted to form hairline joints, with the vertical and horizontal sections at the corners to meet in 45 degrees mitred. The jointing shall be either with accessories such as cleats and cleating screws or by crimping with Hydraulics Press on to heavy duty extruded Aluminium cleats. The relevant arrangement shall be got approved by the Architects/ Engineer in charge. The glazing shall be fabricated and anchored to withstand wind pressures as per the Indian Standard.

14.35.4. Before proceeding with any manufacture, Shop Drawings for each typical elevation shall be submitted for the approval of the Architect and no work shall be performed until the approval of the shop Drawings is obtained.

14.35.5. All Glazing shall be air tight and water tight, using appropriate extruded EPDM gaskets/ as manufactured by MODI or equivalent; and sealant which shall be of high quality and performance requirements.
14.35.6. Each Glazing shall be tailor-made as per openings at Site. No cutting and making good of exposed grit wash plaster surfaces shall be permitted.

14.35.7. All the Aluminium sections shall be wrapped with self-adhesive non-staining thick layer of PVC tapes as approved by the Architects, and shall be duly packed for avoiding scratches or blemishes to the powder coated surface of the sections till the installation is completed.

14.35.8. The frames shall be fixed to concrete/masonry/brick work with dash fasteners and the method of fixing shall be got approved by the Engineer in charge before installation. The drilling of holes for inserting the dash fasteners shall be carried out with drilling machines and the frame shall be fixed in plump, line and level at jambs, sills and heads.

14.35.9. The perimeter gap between the outer frame and the masonry shall be sealed with polysulphide sealant as per the make approved by the Engineer in charge.

14.35.10.Glazing: The glass panes shall be free from flaws, specks or bubbles and shall have square corner and straight edges. The glass panes shall be so cut that it fits slightly loose in the frames. The glass pane shall be fixed to the shutter with Aluminium beading and E.P.D.M. gasket properly snapped on as per the drawing. The glass panes shall be of approved make.

14.36 SUB HEAD - BUILDERS HARDWARE

14.36.1. Mongery shall be provided to all doors, windows and ventilator shutters with necessary matching screws of suitable size.

14.36.2. Fittings and fixtures to all doors shall be of Brass material from JYOTHI manufacturing company and for window and ventilators etc. fittings and fixtures shall be Aluminium anodized Matt finish ISI marked of approved make . The contractor shall obtain the approved of the name of the manufacturer and brand of fittings from Engineer in charge/ Architect before placing the supply order. If demanded an approved copy of Bureau of Indian Standard letter under which the manufacturer has been issued the license and authorized to make the items of builder hardware with ISI marking should be attached and one sample of each fittings of the particular brand duly ISI marked shall be given by Contractor.

14.36.3. Handles for window shutters shall be 75mm long and door shutters shall be 125mm D-Type Aluminium anodized.

14.36.4. Magic eye for entrance door shall be wide angle best quality. This shall be fixed at 1400 mm height from finished door level.

14.36.5. One sample piece of each fitting shall be produced for approval of Engineer in charge/ Architect. The bulk supply order shall be placed by the Contractor only after approval is accorded by Engineer in charge/ Architect.

14.37 Schedule of Builder's Hardware

14.37.1 Schedule of Hardwares/fittings to door, window and ventilator shutters shall be as per drawings.

14.37.2 Mortice Latch (Vertical Type)

Mortice latch (Vertical type) shall confirm to IS 5930-1970, Specification for mortice latch (Vertical Type). These latches shall be capable of being operated inside and outside and shall be provided with a pair of Aluminium anodized lever handle fitted on the handle plate in order to close the door. The latches shall be of brass alloy. Face plate shall be provided in front of the ease plate, size of latch shall be 65mm.

Mortice Locks
These shall conform to IS 2209-1976. Specification for Mortice locks (Vertical Type). These shall have body, body covers, cast plate, faceplate, skirting plate lever, follower of cast brass and locking

bolt and latch bolt extruded brass. Lever spring and latch spring shall be of phosphor bronze. The locks shall be supplied with 2 Nos. stainless steel keys. Locks shall be 6 lever. The lock shall be easily working with lever and shall be capable of being opened with from both inside and outside and shall be provided with a pair of Aluminium anodized lever handles on the handle plate in order to close the door from both side.

14.37.3 Hydraulic Door Closer (Floor Type)
The Contractor shall provide double acting Hydraulic Door Closer (floor type) model No. F-32, Cat No. 1204 with SS Plate. Capacity to carry door weight upto 380 Kg. of EVERITE brand. OR Cat No. OFS 9621 of OPEL brand. These shall be approved brand and manufacturer as above (Conforming to IS 6315) for Aluminium door including cost of cutting floor as required, embedding in floors and cover plate etc.

NOTE:-

1. If any of the fittings are not manufactured as ISI marked there shall be of the same brand of other the ISI marked fittings approved by Engineer in charge.

14.38 SUB HEAD - STEEL & IRON WORK

14.38.1 Quality of steel shall conform to the following specifications:-

(a)	Mild steel (Misc.)	IS 432-1966 Part I
(b)	MS reinforcement bars	IS 432 Part II 1962
(c)	Structural steel works	IS 226-1962
(d)	Steel Deformed Bars	IS-1786/1979

14.38.2 Reinforcement:

(a) Reinforcement bars 6mm dia shall be MS bars.
(b) All reinforcement bars 8mm and above shall be deformed twisted steel bars.
(c) Laps and crossing shall be tied with mild steel binding wire of size not less than 0.9 mm dia.
(d) The Contractor shall be responsible for accurate fixing and placing of reinforcement shown in drawing and shall not place the concrete until the reinforcement has been checked, passed and recorded by the Architect and Engineer in charge.
(e) Reinforcement shall be bent and fixed as per IS-2502-1963.
(f) Laps in reinforcement for columns, beams and slabs etc. will be as stipulated in IS. Or as shown on drawings.

14.38.3 Holdfasts: Holdfasts shall be made out of MS flats of size as specified with split fish tail ends coated with anti rust paint/tar. Holdfast shall be welded to door/windows frame as specified.

14.38.4 Steel Door frame and shutters: Size of door and locations shown on drawing and shall be comprising of frame and shutter fabricated and welded out of MS angle, plate & sheet and 10mm square tie bar. The door shall be painted with two or more coats of synthetic enamel paint of approved quality & shade over one coat of steel primer. Each MS gate shall have hold fast - 6 Nos. Butt hinges 125mm - 3 Nos. MS handles 100mm - 2 Nos. and MS sliding bolts 300 x 16mm - 2 Nos. (1 inside and 1 outside). Hold fasts shall be embedded in PCC block (1:3:6) of size 23 x 23 x 15cm.

14.38.5 Grills : MS grills manufactured out of flat iron, MS square tubes and round bars and of pattern as shown on drawing shall be provided to all windows openable/fixed, glazed portion of doors and fanlight of doors. All grills shall be fabricated and welded to frames.

14.38.6 Railing to staircases, landings, passages, balconies & parapets:-

a) Railing to staircase, landing etc. shall be fabricated with 25mm square M.S. Hollow pipes, 12x12mm square MS bars with vertical supports, MS Perforated sheet & top handrail made of 65x100mm size in first class T.W. etc., as shown in drawing .

b) Verandah/Balcony Railing shall be fabricated with MS flat and 18mm square MS bars with vertical supports & top handrail made of 40mm dia M.S. pipe (medium grade) welded at joints fixed into floor/steps as shown in drawing.

c) The fixing details and dimensions for 7 (a), 7(b) & 7 (c) above shall be as shown in drawings. All welded joints shall be grounded properly before painting. The finished railing shall be true to plumb, line and levels as called for. The mild steel blusters and other exposed mild steel members shall be painted with approved shade and brand synthetic enamel paint as specified in clause No. 11 of SUBHEAD XI.

14.38.7 Exhaust Fan opening : In kitchen provision for fixing of exhaust fan shall be made by fixing 19mm thick BWP grade commercial board with a circular hole 300 mm dia in window as shown on drawings. This opening shall be covered by bird guard fabricated out of galvanized iron sheet 18 gauge as shown in drawing.

SUBHEAD - ROOF COVERING, WATER PROOFING & RAIN WATER PIPES.

14.39.1 Exposed roof at terrace floor level : Roof slabs and Sunken slabs shall be cleaned thoroughly and following treatment/covering shall be provided

SPECIFICATION :-

Treatment to wall and slab junction

1. Surface shall be prepared by wire brushing and cleaning to remove loose particles and finally cleaned with copious amount of water and allowed to dry.

2. Bonding coat using a slurry of Nitobond SBR a polymer mixed with cement and water in the ratio of 1: ½ :1, shall be applied.

3. Coving shall be made along the joint using cement mortar 1:3 admixed with Nitobond SBR at 3 Lts, per bag of cement, shall be prepared and applied onto the primed surface and finished smooth. This shall be applied when the bonding coat reaches touch hard state.

Waterproof coating

1. Surface shall be mechanically scrubbed, to remove loose particles or any laitance, followed by acid etching and water wash and allowed to dry.

2. The prepared surface shall be coated with ready to use, 2 component polymer modified, cement based, waterproofing slurry Brushbond @ 2mm thick in two coats as per manufacturer's specification and instruction.

3. On top of the coating a 15mm thick cement sand mortar (1:3) admixed with cement waterproofing compound like Conplast X421IC (Fosroc) conforming to IS 2645 at the rate specified by the manufacturer shall be applied and the plastered shall be finished smooth with a steel trowel using cement slurry. The surface shall be cured for 3 to 4 days.

The work is to be carried by approved specialist waterproofing agencies like FOSROC or equivalent as approved by Bank / Architects . Work shall be done carefully after all the sanitary and waste pipes & specials are properly installed and connected, without causing any damage to the sanitary installations) (below 100mm thk. CC (1:2:4) paid separately) up to floor two level.

14.39.2 TERRACE WATERPROOFING TREATMENT

Packing and grouting pipe crossing in slabs and beams of toilets sunken slab and beams. Preparing, shuttering, mixing, grouting and curing the pockets holes left for pipe line crossing in the slabs and beams by using Nitobond AR and cement slurry in ratio 1:1:3 (one of NITOBOND AR, one of water and one of cement by volume) applied on the prepared clean surface and immediately mixing and applying CONBEXTRA GPI using 3 to 6mm hard blue metals at ratio (1: ½) by weight and restrained against upward expansion, etc., complete. Necessary care should be taken to prepare the mechanical key on the PVC pipelines on surface of contact to the grouts.

Surface Preparation

The surface to receive the waterproofing shall be cleaned of all dust dirt, loose material, debris, mortar droppings, laitance, oil, grease or any other form of foreign matter and shall be saturated with water.

Providing Chamfers

Chamfers shall be provided at the junction of slab and Parapet wall with 100 x 100mm fillet using cement sand mortar 1:4 mixed water proofing admixture Conplast X421IC @ 150 ml., per bag of cement and cement modifier Nitobond SBR @ 2 Lit. per bag of cement.

Pressure Grouting

1. Water shall be stagnated for 3 days and cold joint and weak spots shall be identified.

2. 10mm dia holes shall be drilled along the cold joint identified weak spots and construction joints of the roof slab and beams hammer drill at spacing not exceeding 500mm c/c.

3. The depth of nozzles shall be adequate to push the grout at all depth. PVC nozzles shall be fixed in the holes drilled using rapid setting mortar Renderoc Plug.

4. Cement slurry mixed with grout admixture Cebex 100 @ 225 gms per of cement shall be prepared to the required consistency and injected through the prefixed nozzles under pressure using grout pump to fill all possible pores and gaps left within the concrete mass. When the flow of the grout stops the grout mains shall be disconnected.

5. The PVC nozzles shall be sealed off with quick setting water proofing agent Renderoc Plug after the injection operation is over.

6. The grout holes shall then be finished after cutting the projected nozzles.

Water proof Coating

The prepared surface shall be coated with ready to use, 2 component polymer modified, cement based waterproofing coating Brushbond @ 1mm thick in two coats and allow to dry completely.

Protective Screed

On top of the coating a 20mm thick plastering using cement sand mortar (1:4) admixed with cement waterproofing compound Conplast X421IC @ 125 ml per bag of cement and polypropylene fibers @ 125 gms per bag of cement, shall be provided and finished smooth.

The work is to be carried by approved specialist waterproofing agencies like FOSROC or equivalent as approved by Bank / Architects . Work shall be done carefully .

14.39.3 Coving/Gola: Providing coving 75 x 75 in cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 stone aggregate 10mm and down gauge) at the junction of RCC slab and wall and junction of tiles and parapet/wall including finishing exposed surfaces with cement mortar 1:4 (1 cement : 4 fine sand) as per drawing. Gola shall be done before plastering of parapet. The rates included in item of roof treatment.

14.39.4 Khurras: Making khurras 600 x 600 with average minimum thickness of 50mm cement concrete 1:2:4 (1 cement: 2 coarse sand: 4 stone aggregate 10mm nominal size) finished with 6mm cement plaster 1:4 (1 cement: 4 coarse sand) and coat of neat cement including rounding of edges and making and finishing the outlets complete as per standard design/ COBA treatment. The rate included in the item of roof treatment.

14.39.5 Chajjas :- Slab shall be cleaned thoroughly and following treatment/covering shall be provided:

Finishing with 12mm plaster in cement mortar 1:4 (1 cement: 4 coarse sand) mixed with water proofing compounds as per manufacturer's specifications OR @ 5% of amount by weight. This shall be applied after thoroughly cleaning surface.

NOTE: All CI/GI pipes and fittings passing through the wall of the sunken portion shall be laid/fixed before the treatment as specified above is carried out.

14.39.6 Unplasticized Rain Water Pipes:

a)The rain water pipes and fittings shall be provided with unplastisized PVC pipes conforming to IS-4985-81 and ISI marked. The u PVC pipes shall be of outside diameter 110 mm. 90mm and 165mm as shown on drawings and of working pressure 6 Kg./sq. cm. Internal & external surfaces of the pipes shall be smooth and clean, reasonably free from grooving and other defect. The U PVC pipes shall be jointed with PVC solution for concealed pipes and for exposed pipes with PVC collars by using lubricating solvent solution. Fittings shall be injection moulded or fabricated type conforming to IS-8008-1976 (Part I and IV) and/or IS 8360-1970 (Part-I to III)and/or as per manufacturers recommendations. The pipe shall start from 150mm above plinth protection at ground level with bend and a tee junction shall be provided at all terrace levels to collect water from khurras and vertical pipe shall be extended upto top of parapet. At top PVC cowl shall also be fitted.

b) Cast iron chamber and grating at the top and outlet of every rain water pipe shall be provided and shall fit in snugly on the socket end of the pipe. The perforations in the grating shall be at least 60% of the total area of gratings.

c) Where the rain water pipes are to be provided concealed within masonry the pipes shall be embedded in the walls with PCC 1:3:6 (1 cement: 3 coarse sand :6 stone aggregate 20mm down gauge) encasing all round. External surface of the pipes shall be painted with PVC adhesive and than coarse sand shall be sprinkled before embedding the pipe in the concrete for proper griping with concrete.

d)Rain water pipes running down along the walls/columns shall be firmly fixed to the wall/ column at all joints and one meter spacing on pipe with PVC clips as per manufacturer instructions.

e) Provide angled end pieces CI shoes at bottom and splash stones of size 450 x 300 x 20mm embedded in plinth protection. Stones shall be quartzite chisels dressed.

SUBHEAD - FLOOR FINISHING, SKIRTING & DADO

14.40.1 General

a) This SUBHEAD shall cover all flooring and wall tilling work as shown in the drawing. No work under this SUBHEAD shall be started until specifically allowed by the Engineer in charge/ Architect and until all other major works such as plastering, embedding of conduits and pipes, channels, windows fixing etc. have been completed. Samples of adequate size representing the quality, size, texture after polishing of the tiles to be used in the flooring work fully shall be prepared for all work and got approved from the Engineer in charge/ Architect before proceeding. The approved samples shall be retained up to the end.

b) Floor shall be laid to level and or to slope as shown on drawings and as required and directed by Engineer in charge/ Architect. Floor shall be carried through all the doors and other openings and over dwarf walls. Exposed edge of floors shall be finished in the same manner as for top surfaces. Skirting shall match with the floor finish.

14.40.2 Sub Flooring

a)For Ground Floor:

Sub floors (base concrete under floor finish) 75mm thick lean concrete in 1:4:8 (1 cement:4 coarse sand & 8 aggregate 40mm nominal size) for all locations

b) For Upper Floors

(i) Sunken/lower portion of slabs: Sub base shall be in lean concrete in 1:5:10 (1 cement :5 coarse sand and 10 brick ballast 40mm nominal size).

(ii) Other floors: Where ever required/directed lean concrete 1:5:10 (1 cement :5 coarse sand and 10 brick aggregate 40mm nominal size) of required thickness laid over RCC slab.

(iii) Floors under cupboards/book shelves/kitchen counters etc. in 1:5:10 lean concrete (1 cement :5 coarse sand and 10 brick aggregate 40mm nominal size).

14.40.3 Plain cement concrete flooring:

Cement concrete 1:2:4 (1 cement:2 coarse sand : 4 graded stone aggregate 12.5mm nominal size) flooring of specified thickness. The thickness of flooring finished shall be 40mm/50mm as specified in schedule of quantities with grooves of 10mm wide shall be left through depth of the flooring

(finishes) to form bays as specified in para 5 (b) hereinafter OR. The top surface shall be finished with floating coat of neat cement using steel float while the concrete is green. With 6 mm PVC strips. As specified in Schedule of quantities.

14.40.4 Skirting To match PCC floors 18mm thick plaster in cement mortar of mix 1:3 (1 cement: 3 coarse sand) finished with a floating of neat cement shall be applied to skirting. The skirting shall be 100 high and it shall be projecting uniformly from the plastered surfaces of walls and columns and separated with horizontal groove of 10 mm x 10mm.

14.40.5 Glazed tiles

a) The tiles shall be of first quality and shall generally conform to IS : 777. These shall be flat, and true to shape and free from cracks, crazing, spots, chipped edges and corners. The glazing shall be of uniform shade and shall be provided in Dado of kitchen and toilets. The tiles shall be set over screed/ plaster 12mm thick with cement mortar 1:3 (1 cement: 3 coarse sand) to all surface, set and jointed with laticrete Adhesive. The joints shall be neat and fine. Tiles face shall be kept flush with the skirting below.

b) Size of glazed tiles both for toilets, Baths, WC and kitchen shall be as shown on drawings.

c) The color of tiles shall be white/colored and the sample shall be got approved before fixing.

d)Height of glazed tiles dado above skirting in toilets and in kitchen, above kitchen platform shall be as shown on the drawings.

14.40.6 The glazed tiles shall be first quality vitreous china and of the following makes:-

(a) Kajaria.
(b) Johnson
(c) NITCO

14.40.7 Finish of working plat forms in kitchens

Finish of the working platform in kitchen shall be with 20mm thick Granite stone slabs diamond cut and mirror polished laid over RCC slab with 20mm cement mortar 1:4 (1 cement: 4 coarse sand). Granite shall be jointed with white cement slurry including grinding smooth and polishing complete

14.40.8 (a) Marble flooring: 20-25 mm thick marble (Makrana Adanga Doongri marble) stone slabs laid over sub floor with 20mm thick base cement mortar 1:4 (1 cement: 4 coarse sand) Marble shall be jointed with white cement slurry including grinding smooth & mirror polishing complete.

(b)Marble Skirting: The marble stone slabs for skirting shall be as specified in clause 12 (a) above and of thickness 15 - 20mm. The stone shall be laid over 12mm thick cement mortar plaster 1:3 (1 cement : 3 coarse sand), jointed with white cement slurry including grinding smooth and mirror polishing.

14.40.9 (a) NON- SKID CERAMIC TILES:

Where indicated in Schedule of finishes shall be laid with cement mortar 1:3 (1 cement : 3 coarse sand) and jointed with white cement paste pigmented to the tile shade.

(b) NON-SKID CERAMIC TILES SKIRTING: Where shown/indicated in the drawing/ schedule of finishes shall be provided 100mm height over 10mm thick cement mortar 1:3 (1 cement : 3 coarse sand) and jointed with white cement paste pigmented to the tile shade.

14.40.10 VITRIFIED TILE

1. Where shown/indicated in the drawing / schedule of finishes, premium range vitrified polished ceramic tiles of 605 x 605 x 10mm size of NITCO or other approved equivalent make (as per drawings) set over a base coat of CM (1:6) 12mm thick shall be provided and jointed with white cement paste pigmented to the tile shade.

2. The tile to be used should be of first quality, equal size and of same shade as approved by Engineer in charge / Architect.

3. The vitrified tiles shall be made from granite granules and bonding agent in the hydraulic press. The size of granite granules shall be uniform and there shall be no appreciable colour deviation. The shade and size of tiles shall be as shown in architectural drawings or as directed by Engineer in charge. Necessary cutting of tiles where required shall be done.

4. Measurement and rates shall be same as for marble flooring/ skirting

14.40.11 VITRIFIED PAVED TILE FLOORING FOR PARKING :

1. Where shown / indicated in the drawing / schedule of finishes, vitrified paved tiles of NITCO make or equivalent as approved by engineer-in-charge, 16mm thick of size 300mm x 300mm set over a base coat of CM(1:6) prop. 12mm thick shall be provided and jointed with white cement paste pigmented to the tle shade.

2. The tile to be used should be of first quality, equal size and of same shade as approved by engineer in charge / Architect.

CLAY PAVERS:

MATERIAL SPECIFICATIONS OF INTERLOCKING CLAY PAVERS

Shape: Tri-Hexagon shaped hard burnt Paver .

Three Hexagon shaped pieces combined to make a single unit with each side measuring 57mm x 57 mm. Thickness should be 50mm to allow for any kind of load bearing capacity. All sides of the Paver having bevelled edges 8-10 mm for greater edge strength.

Colour: Natural Brick red/ Terracotta red with no pigments used.

Material : Clay & clay components.

Compressive Strength of the paving units shall be 400 Kgs./cm2

Water Absorption of the paving units should not exceed 15%.

Efflorescence: NIL

Anti skid/ Anti slip: The pavers should comply to the property of being anti skid/ anti slip. The pavers should be resistant to acid and should not disintegrate when acid poured on them.

Pavers to be coated with a chemical/acrylic coating on the face, further reducing the water absorption and making them resistant to stains.

The pavers when struck with a metallic object or against each other should give a metallic ring.

Laying of Interlocking Clay Pavers

METHOD OF LAYING IN SAND

(i) Preparation of Ground:

Ensure you have root and rubble free compacted sub-base of at least 50mm thick. The sub-base should be roughly leveled and damped down before tamping down firmly with hand or mechanical compactor. Hand compaction is usually enough for most domestic applications. Mechanical compaction should be used when paving vehicle traffic areas.

(ii) Spreading Sand:

Spread the sand to get the level 1. For level 2. The sand should be screened and spread with guide rods to achieve a uniform thickness of 30mm.

(iii) Laying the Pavers:

Commence at a straight fixed edge if possible. Start laying pavers in the desired direction starting from the edge restraint. Start laying the pavers in the desired pattern placing each paver on the sand and tapping lightly with a rubber mallet or hand tamper.

(iV) Brushing in Sand:

After the pavers have been laid use a compactor to push pavers into soft sand. Spread dry screened sand over the laid pavers so that the sand fills the grooves. For heavy traffic repeat this process once again.

14.41 SUBHEAD - WALL FINISHES

14.41.1 General

a)Scope

This SUBHEAD shall cover internal and external plastering/rendering works as shown in the drawings.

b)Mortar : The mortar of specified mix shall be used.

c)Scaffolding

Stage scaffolding shall be provided for plastering work as per standard practice and as directed by Engineer in charge/ Architect. This shall be independent of the walls.

d)Preparation of Surfaces

Joints of brickwork wall shall be raked-out properly. Dust and loose mortar shall be brushed out. Efflorescence if any shall be removed by brushing and scraping., shuttering imperfections of all concrete shall be roughened by hacking with chisel and all resulting dust and loose particles cleaned and the surface shall be thoroughly hacked or bush hammered to the satisfaction of Engineer in charge/ Architect. The surface shall be thoroughly washed with water, cleaned and kept wet before plastering is commenced.

e)Approval of Engineer in charge/ Architect to be taken

No plastering work shall be started before all conduits, pipes fittings and fixtures clamps, hooks etc. are embedded, grouted and cured and all defects removed to the satisfaction of Architect/ Engineer in charge. Special approval shall be taken from Engineer in charge/ Architect before starting each plastering work. No cutting of finished plaster shall be allowed. No portion shall be left out initially to be patched up later on.

f) Mixing

The ingredients shall be mixed in specified proportions by volume. The mixing shall be done in a mechanical mixer. The cement and sand shall first be mixed thoroughly dry in the mixer. Water shall then be added gradually and wet mixing continued for at least a minute until mortar attains the consistency of a stiff paste and uniform colours Mortar shall be used within 30 minutes of addition of water. Mortar which has partially set shall not be used and removed from the site immediately.

14.41.2 Internal Surfaces

i) Plastering shall be started after the completion of ceiling plaster from top and gradually worked down towards floor. It shall not, at any place be thinner than as specified. To ensure even thickness and a true surface plaster of about 15cm x 15cm shall be first applied horizontally and vertically at not more than 2m interval over the entire surface to serve as gauges. The mortar shall then be applied to the wall/ surface between the gauges and finished even. All corner junctions and rounding shall be truly vertical or horizontal and finished carefully. In suspending work at the end of the day plaster shall be cut clean to line where recommencing the plastering, edge of old work shall be scrapped, cleaned and wetted with cement putty before restarting plastering.

ii) Cement plastering internally on all internal surfaces including soffits of RCC slabs, chajjas, lintels, alround shelves, inner side of parapets and alround of parabolas etc. shall be as shown on drawing. Wherever not shown it shall be as under :-

a) 15mm thick plaster in cement mortar 1:6 (1 cement: 6 parts 75% fine sand & 25% coarse sand) over brick and concrete surfaces. Rubbing out wherever required (i.e. bringing up the undulation on the rough face of brick work in level with proudest points) shall also be executed in the same mix along with rendering coat.

b) 12 mm thick plaster in cement mortar 1:3 (1 cement: 3 fine sand) for all ceiling surfaces and on soffits of RCC slabs, chajjas, and kitchen platforms and alround of shelves and pergolas.

10mm x 6mm grooves shall be provided in ceiling plaster at junction of wall and ceiling.

14.41.3 EXTERNAL SURFACES:

A. EXPOSED BRICK WORK

Facing Bricks (Machine Made Brick Tiles)

The facing bricks made from suitable soils shall be free from cracks, flaws, nodules of free lime warpage and organic matter. These shall be thoroughly burnt and shall have plane rectangular faces with parallel sides and sharp straight right angled edges. Facing bricks shall have uniform colour and even texture. Unless otherwise specified, facing bricks shall be machine moulded. Selected hand moulded bricks may also be used as facing bricks where specified. As far as possible, total requirement of facing bricks for a work shall be arranged from the same kiln. Bricks with chipped edges and broken corners shall not be used.

Dimensions and Tolerances

The standard sizes of machine moulded facing bricks shall be as under:

The brick may be modular or non-modular. Sizes of both types of bricks/tiles shall be as per Table 1. While use of modular bricks/tiles are recommended, non-modular (FPS) bricks/tiles can also be used where so specified. Non-modular bricks/tiles of sizes other than the sizes mentioned in Table 1 may be used where specified.

TABLE 1

Type of Bricks/tiles	Nominal size mm	Actual size mm
Modular Bricks	200 x 100 x 100 mm	90 x 90 x 90mm
Modular tile bricks	200 x 100 x 40 mm	190 x 90 x 40mm
Non-modular tile bricks	229 x 114 x 44 mm	225x111x 44 mm
Non-modular bricks	229 x 114 x 70 mm	225x 11 x 70 mm

TABLE 2

The permissible tolerances shall be as under:

Dimension	Tolerance (for Machine moulded bricks) mm	mm
Length	190 or 225	+ 3
Width	90 or 111	+ 1.5
Thickness	40 or 44	+ 1.5

Note: Tolerance and Dimensions for selected hand moulded bricks + 4mm in length and + 3mm in width and thickness.

Sampling and Tests :

Samples of bricks shall be subjected to the following tests:

(a) Dimensional tolerance.

(b) Water absorption.
(c) Efflorescence.
(d) Compressive strength.

Sampling:

For carrying out compressive strength, water absorption, efflorescence and dimensional tests, the samples of bricks shall be taken at random according to the size of lot as given in Table 3 below. the sample thus taken shall be stored in a dry place untill tests are made. For the purpose of sampling, the following definition shall apply:

(a) Lot : A collection of bricks of same class and size, manufactured under relatively similar conditions of production. For the purpose of sampling a lot shall contain a maximum, of 50,000 bricks.

In case of consignment has bricks more than 50,000 of the same classification and size and manufactured under relatively similar conditions of production, it shall be divided into lots of 50,000 bricks or part thereof.

(b) Sample: A collection of bricks selected for inspection and/or testing from a lot to reach the decision regarding the acceptance or rejection of the lot.

(c) Defective: A brick failing to meet one or more of the specified requirements. The samples shall be taken as below :

(i) Sampling from a stack: When it is necessary to take a sample from a stack, the stack shall be divided into a number of real or imaginary sections and the required number of bricks drawn from each section. For this purpose bricks in the upper layers of the stack shall be removed to enable units to be sampled from places within the stack.

NOTE: For other methods of sampling i.e. sampling in motion and sampling from lorries or trucks, IS: 5454 may be referred.

Scale of sampling and criteria for conformity for visual and dimensional characteristics:-

(i) Visual characteristics: The bricks shall be selected and inspected for ascertaining their conformity to the requirements of the relevant specification.

The number of bricks to be selected from a lot shall depend on the size of lot and shall be in accordance of Col. 1 and 2 of Table 3 for visual characteristics in all cases and dimensional characteristics if specified for individual bricks.

(ii) Visual Characteristics: All the bricks selected above in accordance with Col. 1 and 2 of Table 3 shall be examined for visual characteristics. If the number of defective bricks found in the sample is less than or equal to the corresponding number as specified in Col. 3 of Table 3 the lot shall be considered as satisfying the requirements of visual characteristics, otherwise the lot shall be deemed as not having met the visual requirements.

(iii) Dimensional Characteristics: The number of bricks to be selected for inspecting the dimensions and tolerance shall be in accordance with Col. 1 and 4 of Table 3. These bricks will be divided into groups of 20 bricks at random and each of the group of 20 bricks thus formed will be tested for all the dimensions and tolerances. A lot shall be considered having found meeting the

requirements of dimensions and tolerance if none of the groups of bricks inspected fails to meet the specified requirements.

TABLE-3
Scale of sampling and permissible number of defectives for visual and dimensional characteristics.

No.of bricks in the lot	For visual characteristics specified for individual bricks		For dimensional characteristics for group of 20 bricks -No.of bricks to be selected
	No.of bricks to be selected	Permissible No. of defective in the sample	
(1)	(2)	(3)	(4)
2001-10000	20	1	40
10001-35000	32	2	60
35001-50000	50	3	80

Note: In case the lot contains 2000 or less bricks the sampling shall be as per decision of the Engineer-in-charge.

(iv) Scale of sampling and criteria for physical characteristics.
The lot which has been found satisfactory in respect of visual and dimensional requirements shall be next tested for physical characteristics like compressive strength, water absorption, efflorescence as specified in relevant material specification. The bricks for this purpose from those already selected above. The number of bricks to be selected for each of these characteristics shall be in accordance with relevant columns of Table 4.

TABLE 4

Scale of sampling for physical characteristics

Lot size	sample size for compressive strength, water absorption and efflorescence	Permissible No. of defectives for efflorescence
(1)	(2)	(3)
2001-10000	5	0
10001-35000	10	0
35001-50000	15	1

Note: In case the lot contains 2000 or less bricks the sampling shall be as per decision of the Engineer-in-charge.

(v) A lot shall be considered having satisfied the requirements of physical characteristics if the condition stipulated here in are all satisfied.

(a) From the test results or compressive strength, the average shall be calculated and shall satisfy the requirements specified in relevant material specification.

Note: In case any of the test results for compressive strength exceeds the upper limit for the class of bricks, the same shall be limited to the upper limit of the class for the purpose of averaging.

(b) Wherever specified in the material specification, the compressive strength of any individual bricks tested in the sample shall not fall below the minimum average compressive strength specified for the corresponding class of brick by more than 20 per cent.

(c) From the test results for water absorption, the average for the bricks in the sample shall be calculated and shall satisfy the relevant requirements specification in material specification.

(d) The number of bricks failing to satisfy the requirements of the efflorescence specified in the relevant specification should not be more than the permissible no. of defectives given in Col. 3 of Table -4.

Physical Requirements

Facing bricks shall be of class designation 75 unless otherwise specified. Average compressive strength shall not be less than 7.5 N/mm2 water absorption shall not exceed 20 per cent by weight and efflorescence rating shall be nil when tested in accordance with the procedure laid down and tolerance in dimensions shall be checked as per the procedure laid down in Appendix A-2.

Mortar, Soaking of Bricks and laying:

Mortar: The mortar for the brick work shall be as specified, and conform to accepted standards. Lime shall not be used where reinforcement is provided in brick work.

Soaking of Bricks : Bricks shall be soaked in water before use for a period for the water to just penetrate the whole depth of the bricks. Alternatively bricks may be adequately soaked in stacks by profusely spraying with clean water at regular intervals for a period not less than six hours. The bricks required for masonry work using mud mortar shall be soaked. When the bricks are soaked they shall be removed from the tank sufficiently early so that at the time of laying these are skin-dry. Such soaked bricks shall be stacked on a clean place where they are not again spoiled by dirt earth etc.

Note I: The period of soaking may be easily found at site by a field test in which the bricks are soaked in water for different periods and then broken to find the extent of water penetration. The least period that corresponds to complete soaking will be the one to be allowed for in construction work.

Note II: If the bricks are soaked for the required time in water that is frequently changed the soluble salt in the bricks will be leached out, and subsequently efflorescence will be reduced.

Laying : Bricks shall be laid in English Bond unless otherwise specified. For brick work in half brick wall, bricks shall be laid in stretcher bond. Half or cut bricks shall not be used except as closer where necessary to complete the bond. Closers in such cases, shall be cut to the required size and used near the ends of the wall. Header bond shall be used preferably in all courses in curved plan for ensuring better alignment.

Note: Header bond shall also be used in foundation footings unless thickness of walls (width of footing) makes the use of headers impracticable. Where thickness of footing is uniform for a number of courses, the top course of footing shall be headers.

Joints in the exposed brick work shall be truly horizontal and vertical and kept uniform with the help of wooden or steel strips. The thickness of all types of joints including brick wall joints and cross joints shall be such that four course and three joints taken consecutively shall measure as follows:

(i) In case of modular bricks conforming to IS : 1077 specification for common burnt clay buildings bricks, equal to 39 cm.

(ii) In case of non-modular bricks, it shall be equal to 31 cm.

Note: Specified thickness of joints shall be of 1 cm. Deviation from the specified thickness of all joints shall not exceed one-fifth of specified thickness.

Curing and Scaffolding

Curing: The brick work shall be constantly kept moist on all faces for a minimum period of seven days. Brick work done during the day shall be suitably marked indicating the date on which the work is done so as to keep a watch on the curing period.

Scaffolding: Scaffolding shall be strong to withstand all dead, live and impact loads which are likely to come on them. Scaffolding shall be provided to allow easy approach to every part of the work.

Double Scaffolding: Where the brick work or tile work is to be exposed and not to be finished with plastering etc. double scaffolding having two independent supports, clear of the work, shall be provided.

B) Designer Tiles / Dholpur stone / Red stone work

1 All concrete/plastered surfaces to receive stone cladding shall be properly hacked and cleaned of all loose particles and wetted with sufficient water.

2 Dholpur/Red stone slab of required size, 20-25 mm thick to be fixed over Laticrete adhesive.

3. Laticrete is a dry set adhesive, use with water or latex additives.

4. The stone shall be secured to the bracing by means of clamps @ 4 min/ Sqm.

5. Measurement

The finished length accurate to second decimal shall be measured.

6. Rate shall include all materials, labour and other accessories required to complete the work at all heights and depths as required at the site.

14.41.4 LATICRETE ADHESIVE FOR WALLS

a) Material for Plastering : The product shall be a mix of cement and clean sand in a ratio of 1:6, the applied plaster shall be cured for at least 7 days prior to fixing tiles. Standard procedures shall be adopted to install a plaster of high strength with a good bond between the masonry surface and the new plaster, The plaster should be free of cracks for durable installation of tiles.

b) Material for fixing Tiles: The product shall be laticrete 111 crete filler powder mixed with Laticrete 73, latex admix as manufactured by Laticrete International/ Laticrete India Pvt. Ltd. The tile adhesive formed shall have high bond strength, weather, thermal and shock resistance.

c) Material for Grouting: Material for grouting i.e joint filling shall be Laticrete 500 series grout mixed with laticrete 282 grout admix for joints 3mm-12mm as manufactured by Laticrete International/ Laticrete India Pvt. Ltd. The grout formed shall be strong, resistant to weather, cracking and discoloration.

C. Flakes – Granite Finish on cement plaster

Flakes – Granite finish' shall given on the external surfaces of building as per detailed elevation drawings.

"Flakes – Granite finish " is a textured surface coating material manufactured by Bakelite Hylam Limited/ Spectrum.

"Flakes – Granite finish" comes in a three packs comprising 'Dry Granite Flakes' 'Flakes Bonding Agent' and Top coat (HGTC). Dry Granite Flakes' are made from china clay, pigments (primarily inorganic), Homo-polymer emulsion, mica etc. 'Flakes Bonding Agent' is made from pure acrylic co-polymer emulsion, broad-spectrum fungicide etc. Top coat (HGTC is made from solvent based acrylic polymer.

The 'Dry Flakes' are mixed with 'Flakes Bonding Agent' is recommended quantity of water. The dough is then trowelled on to the substrate to be coated to get an average coating thickness in the range of 0.8-1.2mm. After through drying of coated Granite flakes the surface is sanded and dust is removed. Top coat is then applied using a brush.

Granite finish " shall be applied only be an authorized dealer of Bakelite Hylam Limited/ Spectrum, with the help of a trained applicator, in accordance with the Company's 'Application Instructions'.

14.41.5 SUBHEAD – PLASTIC EMULSION AND FINISHING

1. Emulation shall be provided to all ceiling and internal surfaces of lofts staircase, stair lobby and of all building as shown on drawings.

2. Emulation of approved shade shall be provided to all internal surfaces of walls as shown on drawings.

3. Before application of Emulation the surfaces shall be prepared to a clean and even surface.

4. Emulation shall be carried out in three coats.

5. Emulation shall be carried out over white cement based putty as per manufacturer instructions to give even shade.

6. Emulation shall be applied in specified coats by using flat brushers or spray pumps. Each coat shall be allowed to dry before next coat is applied, if additional coats than what have been specified are necessary to obtain uniform and smooth finish, it shall be given at no extra cost.

7. The finished dry surface shall not show any signs of cracking and peeling nor shall it come off readily on the hand when rubbed.

14.41.6 WALL PUTTY : BIRLA PUTTY

APPLICATION

1. Before applying remove all loosely adhering material from the wall surface with sand paper, putty blade or wire brush.

2. Moisten the walls with sufficient quantity of water.

3. Mix the putty with 40- 50% water to make a workable paste.

4. Apply the first coat of putty on moistened surface from bottom to up words uniformly and left to dry for at least 3 hours.

5. Apply second coat and allows to dry for one day and finally rub the surface with fine emery paper to remove unevenness and to get glossy white surface.

6. Emulation shall be applied in specified coats by using flat brushers or spray pumps. Each coat shall be allowed to dry before next coat is applied, if additional coats than what have been specified are necessary to obtain uniform and smooth finish it shall be given at no extra cost.

7. The finished dry surface shall not show any signs of cracking and peeling nor shall it come off readily on the hand when rubbed.

14.41.7 PAINTING

1.Exterior Emulsion / Texture Paint : Before the application of cement based paints, the surface shall be cleaned and wetted with water. Two or more coats of cement base paint shall be applied to give even shade on all external cement plaster surfaces, internal cement plaster surfaces of parapets, soffits of chajjas, lintels, beams, and sills as shown on drawings. The shade of the paint shall be used as approved by Engineer in charge/ Architect. Each coat shall be cured well by wetting surfaces for at least three days. This shall apply to all buildings.

2. Painting to Steel Surfaces: All exposed steel surfaces shall be prepared, cleaned with sand paper to completely remove scales and rusts and shall be painted with two or more coats of synthetic enamel paint to give an even shade over one coat of steel primer. The shade of synthetic enamel paint shall be as approved by Engineer in charge/ Architect.

3. Painting to CI and GI Pipes : All exposed CI and GI pipes shall be painted by applying two or more coats of synthetic paint. The shade and quality shall be as approved by Architect/ Engineer in charge.

14.41.8 MODE OF MEASUREMENTS: The method of measurement for various items in the tender shall be generally in accordance with the IS : 1200 subject to the following :

The following multiplying factors for obtaining equivalent areas shall be adopted.

S.No.	Description of Multiplying Work.	How Measured	Factor
(1)	(2)	(3)	(4)
1.	Panneled or framed each and braced ledged and battened and braced jonery	Measured flat (not githered) including CHOWKAT of frame Edges chocks, cleats, etc., shall be deemed to be included in the item.	1.30 (for side)
2.	Flush joinery	Measured flat (not githered) including CHOWKAT of frame Edges chocks, cleats, etc., shall be deemed to be included in the item.	1.20 (for side)
3.	Fully glazed or guazed joinery	Measured flat (not githered) including CHOWKAT of frame Edges chocks, cleats, etc., shall be deemed to be included in the item.	0.80 (for each side)
4.	Partly panneled and partly glazed or guazed joinery	Measured flat (not githered) including CHOWKAT of frame Edges chocks, cleats, etc., shall be deemed to be included in the item	1.00 (for side)
5.	Fully venetioned or louvered joinery	Measured flat (not githered) including CHOWKAT of frame Edges chocks, cleats, etc., shall be deemed to be included in the item	1.80 (for each side)

6.	Weather boarding	Measured flat (not githered) supporting framework shall be measured seperately	1.20(for each side)
7.	Wood shingle roofing	Measured flat (not githered)	1.10(for each side)
8.	Boarding with cover Fillets and match	Measured flat (not githered)	1.05(for each side)
9.	Tile and slate Battening	Measured flat (not githered) No deduction shall be made for open spaces.	0.80 (for painting all ove)
10.	Trellis (or JAFRI work) one- way or Two way	Measured flat over all , no deduction shall be made for open spaces, supporting Members shall not be measured seperately.	2.00 (for painting all over)
11.	Guard bars balustrade, gates grating, grills expanded metal railing	Measured flat over all , no deduction shall be made for open spaces, supporting Members shall not be measured seperately.	1.00 (for painting all over)
12.	Gates and open palisade fencing including standards Braces, Rails Stays etc.	Measured flat over all , no deduction shall be made for open spaces, supporting Members shall not be measured seperately.	1.00 (for painting all over)
13.	Carved or enriched work	Measured flat	2.00(for each side)
14.	Steel rollers shutters	Measured flat (size of opening) overall jamb guides, bottom rails and locking arrangement,etc. shall be included in the item (top cover shall be measured seperately)	2.00(for each side)
15.	Plain sheet shall Doors and windows	Measured flat (not githered) including	1.10(for eachside)

		frames edges etc.	
16.	Fully glazed or guazed steel doors and windows	Measured flat (not githered) including frames edges etc.	0.50(for eachside)
17.	Partly panneled and partly glazed or Guazed steel doors	Measured flat (not githered) including frames edges etc.	8.80(for eachside)
18.	Collapsible gate	Measured flat (size opening)	1.00 (for painting all over)

NOTE : The height shall be taken from the bottom of the lowest rail, if the palisades do not go below it (or from the lower end of palisades, if they project below the lowest rail) upto the top of palisades, but not upto the top of the standards, if they are higher than the palisades. Similarly for gates depth of roller shall not be considered while measuring the height.

14.41.9 EXPANSION JOINT

POLYSULPHIDE SEALANT :-

It should conform to BS – 4254 – 1983

Surface should be clean, dry and free from any loose material.

Masking tapes are to be used on edge of the joint.

Sealant shall be applied by using suitable gun.

Immediately after filling the joints, the sealant shall be tooled either with stainless steel or wooden spatula of the size of the joint, while tooling the spatula should be wetted with soap water for wetting.

The rate shall be inclusive of all operation i.e labour, material, T & P, scaffolding etc. complete. Nothing extra shall be payable on any account.

Skin contact shall be avoided.

Polyurethane Sealant

Surface should be clean, dry and free from any loose material.

Expanded polyethylene backup rod of diameter (diameter of the rod should be 5mm greater than the width of the joint) of density not less than 28 kg/cum should be provided to allow unrestrained stretching of the sealant.

Masking tapes are to be used on edge of the joint.

Filling the joint up to a depth of 12mm / 15mm for joint width 25m/40mm respectively.

Immediately after filling the joints, the sealant shall be tooled to ensure neat and clean finish of the joint.

Skin contact shall be avoided.

Rates shall be inclusive of all operations including labour material, backup rod, T&P scaffolding etc. complete. Nothing extra shall be payable on any account.

14.41.10 SUBHEAD - INTERNAL PLUMBING WORK
(INTERNAL WATER SUPPLY , PLUMBING, INTERNAL DRAINAGE)

14.41.10.1 GENERAL

1. (a) The form of contract shall be according to the "Conditions of Contract". The following clauses shall be considered as an extension and not in limitation of the obligation of the Contractor .

(b) Work under this contract shall consist of furnishing all labor, materials, equipment and appliances necessary and required. The Contractor is required to completely furnish all the plumbing and other specialized services as described hereinafter and as specified in the schedule of quantities and/or shown on the plumbing drawings.

2.Scope of internal water supply, plumbing, internal sewerage and drainage shall consist of providing and fixing of the following for each blocks as shown on drawings.

(a) GI pipe with fittings and valves for cold and hot water supply.
(b) Sanitary fixtures, CP fittings and accessories.
(c) Soil, waste, vent, rain water pipes and fittings.
(d) Overhead water tank at Terrace with supports.
(e) Internal Drainage including gully traps.

3. The entire work shall be carried out by licensed plumbers.

Water Supply

4. Scope of internal water supply will include the following for each Blocks :-

(a) One over head water tank of capacity as specified 3 layered PEF insulated for each block complete with all fittings including Man Hole cover, Ball valve and necessary supports for fixing on terrace/roof, as per details shown on the drawings.

(b) All GI pipes and fittings from over head tank to all taps, wall mixers, wash basins, cisterns, sinks, geyser points, washing machine and showers as shown on drawings.

c) Provision of hot and cold water supply lines in all toilets and kitchen .

NOTE : External water supply distribution mains including water services connection of each Block up to OH tanks (at terrace) and control valves for water supply lines .

14.41.10.2 MATERIALS

1. All GI pipes shall be galvanized steel tubes medium grade conforming to IS-1239 and ISI marked of approved makes.

2. All GI fittings shall be conforming to IS-1879 and ISI marked.

3. Valve shall be heavy Gun metal full way confirming to IS-778-1971 class I and ISI marked.

14.41.10.3 LAYING, FIXING AND FITTINGS OF GI PIPES

1. All GI pipes below ground shall be laid in trenches and shall have minimum cover of 600mm.

2.The runs of the pipes shall be straight and pipes shall not run diagonally. Proper bends, elbows, tees at turnings/corners shall be used.

3. All GI pipes with necessary fittings wherever they are laid on internal faces of the walls shall be concealed in chase. On external faces they will be laid on walls fixed with G.I. clamps or on M.S. angle iron brackets as shown in drawings.

4. In the concealed portion of plumbing no joints shall be provided in the pipe lines except in the fittings i.e., bends, elbows, tees and nipples where required.

5. All GI pipes for water supply (Hot or cold) within toilets and kitchen shall be laid in walls only. No GI pipe shall be laid in sunken portion of toilets/kitchen.

6. For each block the size of down comers, branch pipes from the ring (at terrace) from over head tank and branch pipes from down comers shall be of sizes as shown on drawing.

7. Pipes and fittings shall be jointed with screwed fittings, care shall be taken to remove burs from the end of the pipe after cutting by a round file. Genuine white/red lead and a few strands of cotton thread shall be applied. All pipes shall be fixed in accordance with layout shown on the drawings. Care shall be taken to avoid air pockets. GI pipes inside toilets shall be fixed in wall chases at least 30cm above the floor.

8. GI pipes in shafts and other locations shall be supported by GI clamps of design as indicated in the Typical detail. Pipes in wall chases shall be anchored by iron hooks.

9. Unions: Contractor shall provide adequate number of unions on all pipes to enable dismantling later. Unions shall be provided near each gun metal valve, stop cock, or check valve and on straight runs as necessary at appropriate locations as per direction of Engineer in charge of APGVB/ Architect.

10. Puddle Flanges: Puddle flanges shall be provided to all connection i.e. inlet overflow, and scour of the over head tank wherever required.

11. Pipe Protection : All pipes in chase or under floors or below ground shall be protected against corrosion by applying two coats of bitumen paint, covered with polythene tape and finished with final coat of bitumen paint.

12. Painting: All exposed pipes shall be painted with two coats of oil paint over one coat of primer. pipes shall be painted to standard color code as approved by Engineer in charge/Architect.

14.41.10.4 Over Head Tanks

(a) RCC Over Head Water Tanks shall be provided at terrace as shown in the drawing.

(b) These tanks shall be constructed on the roof terrace as per details shown on drawings.

(c) Each over head tank shall be complete with the following:

Inlet, outlet, over flow(25mm), scour pipe (20mm) and Air vent pipe with all fittings.

ii) Mosquito proof coupling shall be provided to overflow and air vent pipes.

iii) The inlet pipe to the over head tank shall be provided with ISI marked full way gunmetal brass valve and each outlet pipe shall be provided with ISI marked full way gunmetal valve of size of out let pipe as shown in the drawing.

iv) The over flow pipes shall be brought down up to the finished terrace level on terrace.

(d) Vent pipes : Each down take pipe shall be provided with a vent pipe. The height of the vent pipe shall be 150mm above the top of the water tank.

14.41.10.5 Testing of GI pipes

(a) All pipe lines shall be tested hydraulically to pressure of 7Kg./Sq.cm. for a minimum period of 24 hours for leakage.

(b) The pipe line in chase of under floors/ground shall be covered up only after the testing is carried out satisfactorily and passed by the Engineer in charge/Architect.

(c) The instrument, equipment and water for testing shall be arranged by the contractor without extra charges. (i.e. Hydraulic testing machine with pressure gauge).

(d) A test register shall be maintained by the Engineer in charge and all entries shall be signed and dated by the Contractor, Engineer in charge/Architect.

14.41.10.6 Insulation

(a) Hot water line in chases shall be provided with 20mm thick insulation by wrapping 6mm dia asbestos rope and finishing with a coat of 85% magnesia.

14.41.10.7 Approval of layout of GI pipes and position of fixtures at site

a) The Contractor shall mark the location of all fixtures and fittings and layout of GI pipes on the terrace walls/ground at site and taken approval of Engineer in charge/Architect before commencement of cutting chases for GI pipes within the building and digging trenches outside the building.

14.41.10.8 Sanitary Fixture and CP Fittings and Accessories

a) All sanitary ware shall be first quality white-vitreous china and shall be inclusive of all fixing devices nuts, bolts and hangers/Brackets.

These shall be from one of the following manufactures:-

i) Hindustan Sanitary Ware
ii) Parry Ware
iii)Hydrobath

b) It will be ensured that all sanitary fixtures are from one manufacturer only for the entire work. However, if due to any reason contractor proposes to provide part quantity from other manufacturer as approved above, then he may be permitted, but he will have to obtain specific approval of Engineer in charge/Architect for this change in brand. This will be subject to that all items and fixtures in any particular block/other buildings shall be always of one manufacturer only. In no circumstances items of two manufacturers shall be used in all of the toilets of particular block/other buildings.

14.41.10.9 Kitchen sink and draining Board:

a) Kitchen sink and draining boards shall be of stainless steel (NIRALI) make. The sink and draining board shall be in one piece of following sizes with rectangular compartment/bowl. Each sink shall be provided with one CP brass waste and PVC waste pipe.

b) Kitchen Sink shall be supported on RCC platform having suitable cut for the bowl of the sink as per the details shown on the drawings.

c) All bib cocks, stop cocks, angle-valves, pillar taps, mixtures, showers rose & arm, bottle traps, CP waste and inlet connections and other minor fittings shall be brass chromium plated. These shall be ISI marked where manufactured. Contractor shall obtain the approval of the name of the manufacturer and brand of CP brass fittings from Engineer in charge/Architect before placing the supply order. If demanded, a copy of the Bureau of Indian Standard letter under which the manufacturer has been issued the license and authorized to mark the five items of CP brass fittings as listed in hereinafter below with ISI marking should be submitted One sample of each fittings of the particular brand duly ISI marked shall be given by Contractor.

e)If any of the CP brass fittings which are not manufactured as ISI marked these shall be of the same brand of other ISI marked CP brass fittings approved by Engineer in charge SBOP.

f)All chromium plated brass fittings and accessories shall be provided with CP cast brass wall flanges.

g)For fixing of CP brass fittings wherever required CP brass extension pieces shall be provided.

h)Fixing screws shall be half round head chromium plated brass screws with CP washers.

i)All exposed pipes, if any, within the toilets and near the fixtures shall be chromium plated brass except otherwise specified.

Schedule of Sanitary and CP Brass fittings in each Block shall be as under :-

(a) Kitchen
(i) Stainless steel Sink with drain board of overall size 510x1060 with bowl size of 500x 400 x 200 mm.
(ii) CP Brass waste coupling.
(iii) Sink Mixer

(iv) GI Waste pipe 40mm dia from CP Waste to floor drain grating.

(b) Toilets: All vitreous china sanitary wares. The fittings and fixtures in toilets of each Block shall be as under :

(A) **Wash Hand Basin**

i)Vitreous china first quality.
wash basin 550x400mm counter top type
ii)CP Brass waste 32mm dia with over flow.
iii)CP Brass bottle trap with CP brass pipe to
wall with CP brass wall flange.
iv)CP Brass Basin Mixer.
v)CP Brass angle valves with PVC
connecting pipes with nuts and washers.

NOTE: Outlet of CP brass bottle trap shall be connected to nearest floor trap by GI waste pipe (concealed) as per details shown on drawings.

(B) Water Closets and Cisterns

i)European type white vitreous china ware pedestal type and cistern

ii)White 6.00 litre capacity low level flushing cistern with fittings and C.I /M.S brackets.

iii)W.C with concealed type flush bend, over flow arrangements, mosquito proof coupling.

iv)CP brass angle valve with PVC connecting pipe with nut and washer.

v)Bakelite solid type seat and cover ISI marked Type 1A (IS-2548-1983) with CP brass Hinges commander brand (white colour).

vi) G.P jet spreader complete set with concealed stop cock.

c) BATH TUBS
Hydro bath make corner model of size 1230 x 1230 x 380mm.

Hydro bath make rectangular model of size 1690 x 755 x 435mm.

(D) Urinals
White vitreous chinaware flat back urinal of size 630 x 400 x 420 mm with 12 mm angle valve, C.P spreader, C.P dome grating, C.P brass flush pipe.

(E) Shower and Taps

(i) CP brass wall mixer with bend for over head shower with central control knob for three positions, for supply to spout, second to stop and third for supply of shower.

(ii) 100mm dia CP brass shower rose 15mm with ball joint and 230mm long CP brass extension pipe.

(F) Towel Rail

i) CP brass towel rail 20mm dia 16 gauge 600 mm long including brackets.

(G) Towel Ring

i) CP brass towel ring 200 mm dia with CP brass brackets fixed to wall with flanges and CP brass screws.

(H) Mirror of size as specified in the items and 4mm thickness over every wash hand basin. The mirrors shall be of make Modi float or Atul Brand made from Tata Ashi float glass. The mirror shall have marine ply backing 9mm thick with teak wood moulding all around of size 1-1/2" x 3/4 "

(I) Peg Sets: Aluminium Anodized with 3 hooks.

(J) Gratings:

(i) All floor traps (FT) and floor drains (FD) shall be provided with 100mm round stainless steel gratings respectively of approved design and shape. The weights of 100mm dia gratings shall not be less than 100 gms.

ii) Gratings for floor drain (FD) below sink in kitchen shall have suitable hole for passing GI waste pipe from sink.

Geysers: Scope for arrangement of fixing of Geysers included in this contract is as under :-

(a) Arrangement for fixing electric geyser vertical type on each in toilets.

(b) At the inlet pipe of all Geysers one number CP brass angle valve shall be provided.

(c) The ends of inlet and outlet pipes shall be connected with on PVC connecting pipe with CP brass nuts and washers. This is to pass the water from inlet to outlet till Geyser is installed at a later date.

(d) Provisioning and fixing of Geysers is beyond the scope of this contract.

14.41.10.10 Installation of Sanitary Fittings

(a) European Type water closets shall be fixed with brass screws of suitable length with PVC plugs or phill plugs embedded in the floor after drilling hole in floor. It should be coupled with low level flushing cistern complete with rubber cone adapters etc, all as per manufacturer instructions.

(b) Wash hand basins shall be fixed firmly to wall with MS angle iron brackets. The brackets shall be given two coats of white enamel paint over a coat of primer. In addition the wash basin shall be securely fixed to walls with a pair of 25x3mm MS clips screwed with rawl plugs to walls (placing of basin over the brackets with out secure fixing on wall shall not be accepted).

(c) Indian type Water Closets shall be embedded firmly in the floor and its surrounding packed with cement concrete (1:3:6) 40mm graded aggregate below the level of top of the Closet to receive the top layer of floor finish. WC shall be set in the CI trap in cement concrete 1:3:6 (1 cement:3 coarse sand:6 graded stone aggregate 20mm nominal size), joint between WC and Flush pipe will be made in the pre-moulded rubber joint.

d) Urinals: Urinals shall be flat back white glazed vitreous china of first quality and size 630 x 400 x 420 mm size.

(i) Urinals shall be provided C.P spreader, 32mm dia CP domical waster and C.P angle valve, and shall be fixed to wall by one CI bracket and two CI wall clips complete as recommended by manufacturer's directives/Engineer in charge.

(ii) Half stall urinals shall be fixed with C.P. brass screws.

(iii) Flush pipes shall be G.I. pipes concealed in wall chase but with chromium plated bends at inlets and outlets.

(iv) Urinals may be flushed with flush valves as described in the item.

(v) Waste pipes for urinals shall be any of the following.

a) G.I. pipes. b)Rigid PVC.

Waste pipes may be exposed on wall or concealed chase as directed by the engineer-in-charge.

Specifications for waste pipes shall be same as given in SUBHEAD II.

14.41.10.11 Internal Drainage:

Scope of internal sewage disposal and drainage system for all buildings/under this contract will include the following and shall be provided as per the layout/locations shown on drawings:

(a) GI floor drains in toilets and kitchen.
(b) HCI waste pipes and their connections up to Gully traps.
(c) HCI soil pipes and their connections up to nearest manholes.
(d) Vent pipes with vertical stacks
(e) All floor traps and gully traps.

NOTE:SWG sewerage lines from Gully Trap and nearest manholes onwards shall be measured and paid separately .

Soil, Waste, Vent and Rain Water Pipes: All pipes shall be sand cast iron and shall comply to IS-1729 of 1979 and shall be ISI marked. Where shown on drawings the floor drains (FD) shall be of GI pipe medium grade ISI marked.

All cast iron pipes fittings like bends, branches, floor traps, tees 'Y' junctions, in waste, soil and vent pipes shall be sand cast iron comply with IS 1729 and shall be ISI marked. These shall be spigot and socket "Access door shall be made up with 3mm thick insertion rubber washer and white lead. The bolts shall be lubricated with grease or white lead for easy removal later. The fixing shall be air and water tight".

Cast Iron Traps

Floor trap shall be cast iron, deep seal with an effective seal of 50mm. The trap and waste pipes shall be set in cement concrete blocks firmly supported on the structural floor. The blocks shall be in cement concrete 1:2:4 (1 cement:2 coarse sand: 4 graded stone aggregate 20mm nominal size) and extended to 40mm below finished floor level. The concrete portion at top of the floor trap inlet shall

be finished smooth and water proofed by applying neat cement slurry mixed with water proofing compound. Size of the blocks shall be 30x30cms of the required depth. The trap shall be 100mm inlet and 100mm outlet for kitchen and for toilets. Traps shall have extension pieces to receive waste lines as indicated in typical details.

Urinal Traps

Urinal traps shall be cast iron P&S trap with or without vent and set in cement concrete block specified in para above without extra charge.

Clean out Plugs

Contractor shall provide cast brass cleanout plugs as required. Cleanout plugs shall be thread and provided with key holes for openings. Cleanout plugs shall be fixed to the pipe by a G.I. socket lead caulked.

Laying and Joining of CI (Cast Iron) Pipes:

(a) Pipes and fittings shall be fixed truly vertical horizontal or in slope as required in a neat workmanship. Pipes shall be fixed in a manner as to provide easy accessibility for repairs and maintenance and shall not cause obstruction in shafts etc.

(b) All vertical pipes shall be fixed by MS clamps truly vertical Branch pipes shall be connected to the stack at the same angle as that of fittings. No collar shall be used in HCI pipes laid in sunken portion of slabs and vertical stacks. Each stack shall be terminated at top with a cast iron COWL and to the height as specified hereinafter.

(c) MS clamps shall be standard design and fabricated from MS flat 40x3mm thick anchored directly to walls, concrete slabs, beams or column or as indicated in detailed drawings or and as directed by Engineer in charge/Architect.

(d) Joints in cast iron soil, waste, vent and rain water pipes shall be lead caulked joints. Quantity of lead to be used for each joint shall be 1.2Kg. for 100 dia pipes, 1.00 Kg. for 75 mm dia pipe and 0.80 Kg. for 50mm dia pipe.

(e) The water closet in ground, first and second floor shall be connected to the common soil pipe coming vertically downwards along the external face of walls with single branch connections with necessary bends/Y junction containing access doors. A vent pipe shall be provided from the single branch connection at the last floor level (as a continuation of the soil pipe) taken vertically upwards up to 800mm above the top of parapet wall and shall be provided at top with cast iron cowl.

(f) CI/GI waster pipes and HCI soil pipes laid under floors shall rest in cement concrete 1:2:4 (1 cement:2 coarse sand:4 parts stone aggregate 20mm, 70mm thick minimum) 300mm wide. All pipes and fittings shall also be encased al-round with concrete 1:2:4 70mm thick.

(g) Floor traps shall have extension pieces to receive waste pipes. Waste pipes from floor traps shall be connected to common waster pipe coming downward along the external face of walls with single branch connections with necessary bends/Y junctions containing access doors. The common waste pipe shall run vertically downwards up to gully trap. A vent pipe shall be provided from the single branch connection at top of parapet wall and shall be taken vertically upward up to 800mm above the top of parapet wall and shall be provided at top with a cowl and fixed with iron clamps.

(h) Cast iron drain pipes passing under the building shall be laid before commencement of works in foundations and where passing through concrete work inserts/sleeves should be left before casting the concrete.

(i) Drain pipe shall be laid to levels/slopes indicated in drawings.

(ii) Soil, waste, vent and rain water pipes in exposed location in shafts and pipe space shall be painted with two or more coats or oil paint to give an even shade. G.I. pipes in chases shall be painted with two coats of bitumen paint.

Gully Traps

(a) Gully traps shall be of the same quality as described for stoneware pipes.

(b) After excavation gully traps shall be fixed on 100 mm thick cement concrete 1:5:10 mix (1 cement:5 coarse sand:10 stone aggregate 40mm nominal size). After fixing the gully trap and pipe a brick masonry chamber 1'x1' inside in 4-1/2" thick brick work around the gully trap in cement mortar 1:5(1 cement: 5 coarse sand) shall be constructed up to the ground level. The space between chamber wall and the trap shall be filled in with cement concrete 1:5:10 (1cement: 5 coarse sand:10 stone aggregate 49mm nominal size). The upper portion of the chamber shall be plastered inside with cement mortar 1:3 (1 cement: 3 coarse sand) finished with a floating coat of neat cement with all corners rounded off sloping towards the grating. A square CI grating shall be fixed on trap inlet.

Testing:

a) HCI soil and waste and vent pipes. These shall be tested to hydraulic test of 8 mtr. head.

b) The joints of CI pipes coming under floors/walls shall be covered up only after testing is carried out satisfactorily and passed by Engineer in charge/Architect.

c) For SWG pipes test as indicated in particular specification part III shall be carried out.

d) A test register shall be maintained which shall be signed and dated by Contractor, Engineer in charge and Architect.

Approval of layout of waste/soil/GI/CI/SWG pipes, Floor traps, gully traps and manholes. The Contractor shall mark the location of these pipes, floor traps, gully trap and MG on floors / walls/ground at site and take approval of Engineer in charge/Architect before commencement and cutting of holes in walls, digging of trenches and laying of pipe lines. Record of these approvals should be recorded in a register and kept in Engineer in charge's office.

On completion of the works, the following tests shall be performed to the satisfaction of the architects/ Employer before issue of virtual completion certificate, if sobe required

a. Smoke test.

b. Hydraulic test .

c. Self indiucted test for fixtures .

d. Test for anti syphonage system.

e. Pump rating and output.

f. Inseption of all units and fixtures.

14.42 SUB HEAD - BOREWELL

1. Drilling with direct Rotary reverse hydro pneumatic rotary rig drill with 600/450 mm dia bore.

2. Fixing M.S (ERW) Housing pipe 300 mm dia with 5.6 mm wall thickness including sockets etc.

3. Fixing M.S (ERW) 200 mm dia slotted pipe with 1.5 mm to 3 mm slots as per strata conditions including sockets and reducer etc.

4. Fixing M.S Blind pipe 200 mm dia medium class coupling etc.

5. Fixing bail plug with hook 200 mm dia.

Fixing M.S centering guides 200 mm dia.

7. Fixing 300 mm dia M.S clamps 1.00 Meter long 100 x 12 mm flat.

8. Inserting of pea gravel and packing the same in space between boring and well assembly with pea gravel of 3-6 mm size after screening and washing.

9. Development with air compressor (80 Hours).

10. Sanitary sealing as per Specifications.

11. Testing of water sample for drinking purpose in standard Laboratory approved by the Engineer in charge/ Architect or furnishing the report.

12. Testing of tube well for yield Test.

13. Fixing of M.S well cap.

14. Fixing of submersible pump of 16 HP with all electrical fittings of approved make.

15. LIST OF APPROVED MANUFACTURERS / NATURAL SOURCES OF MATERIALS TO BE USED IN THE CIVIL WORKS SUBJECT TO THE APPROVAL OF SAMPLES BY THE CONSULTANT.
(ALL THE MATERIALS USED HAVE TO CONFIRM TO GREEN INTERIOR NORMS OF IGBC)

S.No	MATERIAL NAME.	BRAND / MANUFACTURER.
1.	CEMENT	L&T, BIRLA, ACC or any other approved brand 43 GRADE FOR plastering AND 53 GRADE FOR RCC WORKS
2.	ANTI-TERMITE CHEMICALS	CHLOROPYROPHOS, EMULSIFIABLE CONCENTARATES
3.	CLAY BRICKS	GOOD QUALITY BRICKS
4.	UPVC WINDOWS, DOOR FRAMES & SHUTTERS	NCL, LG, ENCRAFT & FENESTA
5.	PAINTS	ASIAN, NEROLAC, JOTUN, BIRLA EXTERIOR GRADE AND INTERIOR GARDE
7.	HYSD / MILD Steel (TMT)	TATA, SAIL,VSP
8.	SAND	RIVER SAND
9.	TEXTURE PAINT	BIRLA, SPECTURM, ASIAN
10.	GROUTS & EPOXY	LATECRETE EPOXY, BOSTIK EPOXY,DR FIXIT
11.	WATER PROOFING	FORSOC, ALGI PROOF, DR FIXIT
13.	EXTERNAL PUTTY	BIRLA, ASIAN
14.	SINKS	NIRALI or any other approved brand
15	600MM X 1200MM GLAZED VITRIFIED TILES (GVT)	JOHNSON, KAJARIA, RAK
16	VITRIFIED TILES WALLS GLAZED AND FLOOR ANTI SKID	JOHNSON, KAJARIA, RAK
17	M.S STEEL TUBULAR HOLLOW SECTIONS SOILD SECTIONS,FLATS	TATA,SAIL,VSP,JSW,MITTAL
18	CURTAIN WALL GLAZING and ALUMINIUM SECTIONS	JINDAL,NALCO,BALCO,Hindalco
19	GLASS FOR CURTAIN GALZING AND WINDOWS	SAINT GOBIN,ASHI FLOAT,MODI GUARD
20	EXTERNAL CLADDING PLANKS AND BOARDS	SHERA, VISAKA ,
21	EXTERNAL PUTTY	BIRAL
22	PARKING TILES	CLASSIC/ SUPREME/ ASIAN/ RAISE STONES

S.No	MATERIAL NAME.	BRAND / MANUFACTURER.
1.	SANITARY FIXTURES	CERA,PARRYWARE, HINDWARE,JAQUAR,
2.	CP FITTINGS	CERA,PARRYWARE,HINDWARE,JAQUAR ,
3.	CPVC PIPES	ASTRAL, FLOWGUARD
4.	PVC PIPES	SUDHAKAR, CLIPSAL,PRINCE
5.	VITRIFIED TILES (Anti skid tiles)	JOHNSON, KAJARIA, RAK
6.	SWG PIPES	INDO or nay other approved brand

NOTE: The contractor shall use only above mentioned material. All other materials shall confirm to the specifications laid down. The tenderer shall take this into account while tendering rates / prices.

16. LIST OF REGISTERS / RECORDS TO BE MAINTAINED AT SITE BY THE CONTRACTOR FOR THE FOLLOWING MATERIALS / ITEMS

- Cement
- Steel
- Anti – termite chemical
- Test Reports
- Brick wrok
- Hindrance
- Labour wages
- Site Order Book

Apart from the above, some other registers also to be maintained as and when required.

16. LIST OF MANDATORY TESTS :

TEST	TEST PROCEDURE	MINIMUM QUANTITY	FREQUENCY
Cement	From Manufacturer		For each lot
SAND			
Silt Content	Field	40 Cum	40 cum or part thereof
Bulking	Field	40 cum	50 cum or part thereof
Particle size distribution	Field	80 cum	Every 80 cum or required in RCC work.
COARSE AGGREGATE Particle size		135 cum	Every 135 cum or part thereof for RCC work for rest of work as desired.

Distribution			
R.C.C.			
Slump			Once a day or as desired.
Cube Strength	From lab	20 cum in slab beams and connected columns 5 cum in column	Every 20 cum of a days concrete. Every 5 cum in column concrete.
BRICKS :			
Water absorption and efflorescence	From lab	Designation 40	One test for each source of manufacture
Compressive Strength	Rom lab	Designation 40	1,00,000 or part there of Two tests for 1st lot of 1,00,000 and one test later for every 2,00,000 and part thereof.
TIMBER :			
Species		1 cum	Every three cum and part.
Moisture		1 cum	Every three cum and part.
UPVC DOORS AND WINDOWS Thickness of anodic coating	IS – 4020AND 4021		5% of Nos. Manufactured.
MORTICE LOCK : Testing of Springs		50 nos	100 OR part thereof
STEEL : A. Tensile Strength	IS 1529	20 Tonne	Every 20 Tonne or part
B. Bend Strength	IS 1529		-- DO --
MARBLE, MOSAIC / TERRAZO TILES			
1. Transverse Strength	IS 1237	10,000 Tiles	10,000 tiles or part
2. Water absorption	IS 1237	10,000 Tiles	10,000 tiles or part
3. Abrasion test	IS 1237	10,000 Tiles	10,000 tiles or part
VITRIFIED TILES, GLAZED TILES			
1. Water absorption	IS 777	10,000 Nos	10,000 or part
2. Craxing	IS 777	10,000 Nos	10,000 or part
3. Impact	IS 777	10,000 Nos	10,000 or part
FLUSH SHUTTER :			
1. End immersion	IS 2202		
2. Knife			No. of shutters
3. Adhestion		22-65 66-100 101-180	1 2 2

		181-300 301-500 501-above	3 4 5

1. Cost of testing and transport will be borne by the contractors.

2. Any other material will be tested by contractors at his own cost as per the instructions and Bank from time to time.

3. Frequency stated above is minimum and the contractor may have to test materials with any frequency as instructed by Architect / Client without any cost.

17.0 INDIAN STANDARD (IS) CODE

IS - 3764 - Safety Code for Excavation Work.

IS - 2720 - Part - II - Determination of Moisture Content
Part - VII - Determination of Moisture Content Dry Density Relation using Light Compaction.
Part - VIII - Determination of Moisture Content Dry Density Relation using Heavy Compaction.
Part -XXVIII- Determination of Dry Density of Soils,in-place, by the Sand Replacement Method.
Part - XXIX - Determination of Dry Density of Soils in-place, by the Core Cutter Method.

IS-6313 (Part I) : Code of practice for Anti-termite treatment in buildings constructional measures.

IS-6313 (Part II) : Code of practice for Anti-termite treatment measure in building (pre-constructional chemical treatment).

IS 269 Specification for Ordinary, rapid-hardening and low heat Portland cement.

IS 455 Specification for Portland Blast Furnace Slag Cement.

IS 1489 Specification for Portland-Pozzolana Cement.

IS 4031 Method of physical tests for hydraulic cement.

IS 650 Specification for Standard Sand for Testing of Cement.

IS 383 Specification for coarse and fine aggregates from natural sources for concrete.

IS 2386 Methods of tests for aggregates for concrete (Parts I to VIII)

IS 516 Method of tests for strength of concrete.

IS 1199 Method of sampling and analysis of concrete.

IS 3025 Methods of sampling and test (physical and chemical) water used in industry.

IS 432 (Parts I & II) Specification for mild steel and medium tensile steel bars and hard drawn steel wire for concrete reinforcement.

IS 1139 deformed Specification for hot rolled mild steel and medium tensile steel bars for the concrete reinforcement.

IS 1566 Specification for plain hard drawn steel wire (Part I) fabric for concrete reinforcement.

IS 1785 Specification for plane hard drawn steel wire for prestressed concrete.

IS 1786 Specification for cold twisted steel bars for concrete reinforcement.

IS 2090	Specification for high tensile steel bars used in prestressed concrete.
IS 4990	Specification for plywood for concrete shuttering work.
IS 2645	Specification for integral cement water-proofing compounds.
BS 4461	Cold worked steel bars for the reinforcement of concrete.

IS 10262 Recommended

Equipment

IS 1791	Specification for batch type concrete mixers.
IS 2438	Specification for roller pan mixer.
IS 2505	Specification for concrete vibrators, immersion type.
IS 2506	Specification for screed board concrete vibrators.
IS 2514	Specification for concrete vibrating tables.
IS 3366	Specification for pan vibrators.
IS 4656	Specification for form vibrators for concrete.
IS 2722 and	Specification for portable swing weigh batchers for concrete (single double bucket type.)
IS 2750	Specification for steel scaffoldings.

Codes Of Practice

IS 456	Code of Practice for plain and reinforced concrete.
IS 1343	Code of Practice for prestressed concrete.
IS 3370	(Parts I to IV) Code of Practice for concrete structures for storage of liquids.
IS 3935	Code of Practice for composite construction.
IS 3201	Criteria for design and construction of precast concrete trusses.
IS 2204	Code of Practice for construction of reinforced concrete shell roof.
IS 2210	Criteria for the design of R.C.shell structures and folded plates.
IS 2751 concrete	Code of Practice for welding of mild steel bars used for reinforced construction.
IS 2502 reinforcement.	Code of Practice for bending and fixing of bars for concrete
IS 3558 concrete.	Code of Practice for use of immersion vibrators for consolidating
IS 3414	Code of Practice for design and installation of joints in buildings.
IS 4014	Code of Practice for steel tubular, scaffolding (Parts I & II)
IS 2571	Code of Practice for laying in situ cement concrete flooring.
IS 13920	Code of Practice for ductile detailing of reinforced concrete structures subjected to seismic forces.

Construction Safety

IS 3696	(Parts I & II) Safety Code for scaffolds and ladders.

IS 383 Coarse aggregates for concrete, except as stated above and for other than light weight concrete

IS 4031	Test blocks shall be prepared and tested in accordance with the requirements of IS 4031.
Water	Method of Test (Clause Ref. IS 3025-1964)

MASONRY

a) RUBBLE MASONRY

IS 1129 (1972)	Stone; Dressing
IS 8348 (1977)	Stone; slabs, stacking and packing for transportation
IS 1805 (1973)	Glossary of terms: quarrying and dressing
IS 1121 (1957)	Compressive, transverse and sheer strength determination
IS 8759 (1977)	Maintenance and preservation of stone
IS 4348 (1973)	Permeability determination
IS 1122 (1957)	Specific gravity and porosity determination
IS 4121 (1967)	Water transmission rate through natural building stone
IS 1706 (1972)	Wear resistance, determination by abrasion method

Coursed Rubble (First Sort) in Superstructures

IS 1597 (Part I).

BRICKWORK AND BLOCK WORK

IS 1077	Specification for Common Burnt Clay Building Bricks
IS 2116	Specification for Sand for Masonry Mortar
IS 2212	Code of Practice for Preparation and Use of Masonry Mortar
SP 27	Handbook of Method of Measurement for Building Works
IS 432	Specifications for Mild Steel and Medium Tensile Bars
IS 2185	Specification for Cement Concrete Block
IS 2572	Code of practice for Construction of Concrete Walls
IS 9103	Specification for Admixture of Concrete

CONCRETE BLOCK WORK

Hollow or solid concrete blocks shall conform to IS 2185

Mortar for Brickwork and Block work : IS 2250

Sand shall be natural sand in accordance with : IS 383

Workmanship for Brickwork : IS 2212

WALL AND CEILING FINISHES

IS 383	Specification for Coarse and Fine Aggregates
IS 412	Specification for Expanded Metal Sheets for General Purposes
IS 1542	Specification for Sand for Plaster
IS 1635	Code of Practice for Field Slaking of Building Lime and Preparation of Putty
IS 1661	Code of Practice for the Application of C3ment and Cement-lime Plaster Finishes
IS 2394	Code of Practice for the Application of Lime Plaster Finish
IS 2402	Code of Practice for External Rendered Finishes
IS 2645	Specification for Integral Cement Waterproofing CompoundMATERIALS

Cement shall be ordinary Portland cement conforming to IS 269
Lime shall conform to IS 712.
Sand shall conform to IS 1542
Pigments mixed with cement shall conform to IS 2114.
Integral waterproofing compound shall conform to IS 2645.
Expanded metal backgrounds for plastering and/or rendering shall conform to IS 412.

PAINTING

IS 427	Specification for distemper – dry colour
IS 428	Specification for distemper – oil emulsion colour
IS 1477 (Pre-	Code of Practice for painting of ferrous metals in buildings – Parts I and II treatment and Painting)
IS 2395	Code of Practice for painting concrete, masonry and plaster surfaces
IS 2932	Specification for enamel synthetic exterior undercoating and finishing
IS 2933	Specification for enamel exterior undercoating and finishing
IS 3140	Code of Practice for painting asbestos cement building products
IS 3537 IS	Specification for ready-mixed paint, finishing, interior, for general purposes to colours
IS 3631 for	Specification for ready-mixed paint for finishing interior, alkyd and non-alkyd general purposes to IS colours
IS 5410	Specification for coloured cement paints
IS 6005	Code of Practice for phosphating iron and steel
IS 6278	Code of Practice for whitewashing and colour washing

Washable oil bound distemper shall conform to IS 428

EXTERNAL SANITARY WORKS

IS 651 – 1992	Specification for Salt Glazed stoneware pipes and fittings (fifth revision).
IS 6924 – 1973	Code of practice for construction of refuse chutes in multistoried buildings
IS 1200 (Part 1)	Method of measurement of building earthwork IS 1200 (Part 16) Method Of measurement of laying of water and sewer lines including appurtenant
IS 1200 (Part 19)	Method of measurement of Water supply, plumbing and drains.
IS 783 – 1959	Code of practice for laying of concrete pipes
IS 13592 –IS 1992	Specification for unplasticized PVC pipes for soil and waste discharge system inside building including ventilation and rainwater.
IS 2527 – 1984	Code of practice for fixing rainwater gutters and down pipes for roof drainage.
IS 458 – 1988	Specification for precast concrete pipes (with or without reinforcement)
IS 782 – 1978	Specification for Caulking Lead.(Third revision)
IS 1172 – 1983	Code of basic requirements for water supply, drainage & sanitation (revised).
IS 1239 – 1990	Specifications for mild steel tube, tubular and other steel pipe (Part I)fittings.
IS 1239 – 1992 (Part II)	Specifications for mild steel tube, tubular and other steel pipe fittings.
IS 1726 – 1991	Code for cast iron manhole frame and cover (third revision).
IS 1742 – 1983	Code of practice for building drainage.(Second revision)
IS 2065 – 1983	Code of practice for water supply to buildings.
IS 3114 – 1985	Code of practice for Laying of CI pipes

IS 4111 – 1986	Code of practice for Ancillary structures in sewerage system
IS 1536 – 1976	Specification for centrifugally cast (spun) iron pressure pipes for water, gas and sewage.
IS 1537 – 1976	Specification for vertically cast iron pressure pipes for water, gas and sewage.

ABSTRACT TO GENERAL CONDITIONS OF CONTRACT		
1	Earnest money Deposit	RS.54000.00
2	Initial Security Deposit	2.0 % of Quoted value including EMD.
3	Date of commencement	7 days from the date of receipt of work order
4	Period of Completion	6 Months from date of commencement
5	Defects Liability Period	12 months
6	Agreed Liquidated Damages	0.5% of tender amount per week subject to a maximum of 7.50% of contract value
7	Period of Final Measurement	90 days
8	Value of work for the issue of Interim Certificate	Minimum Rs.20 Lakhs
9	Retention money from each interim bill	8%
10	Total retention money including Earnest Money and initial security deposit	As per Clause 11, of General Conditions Contract
11	Architects certificate of payment	15 days after submission of interim bills by the Contractor.
12	Period of honoring payment certificate	7 working days from date of Architect's certificate of payment for interim bills and 45 working days for final bill certificate.
13	Delayed Payments	No interest will be paid on this account
14	Estimated value	RS 53,54,148.20/- Plus GST as applicable.

SIGNATURE OF THE CONTRACTOR WITH DATE

WITNESS:
DATE:

DECLARATION

I/We have inspected the site of works and have made me / us fully acquainted with the local conditions in and around the sites of works. I/We hereby declare that I/We have gone through the conditions laid down in the Notice Inviting Tender, Conditions of Contract, Technical Specifications and understood the same and on the basis of the same I/We quoted our rates in the Schedule of Quantities attached with the tender documents.

I/We shall also uniformly maintain such progress as may be directed by the Employer / Architect to ensure completion of same within the target date as mentioned in the tender document.

Witness:

Signature of Tender

Address_____

_____

_____

Date:_____

BOQ FOR PROPOSED CONSTRUCTION OF BRANCH BUILDING OF ANDHRA PRADESH GRAMEENA VIKAS BANK AT AKUTHOTAPALLY, AMANGAL, MAHABUBNAGAR DIST, TELANGANA.					
S.NO	**DESCRIPTION OF WORKS**	**UNIT**	**QTY**	**RATE**	**AMOUNT**
I	**CIVIL WORKS**				
1	**SITE CLEARING**				
	Site Clearing: Cleaning and grubbing for removal of rank, vegetation, shrubs, trees, bushes, stumps, weeds, grass including roots, debris, unusable materials, removal of 150mm thick top soil using manual or mechanical method and carting away to a distance of minimum 5km to the municipal or contractors own dump yard including dumping to approved areas within the project site, stacking usable materials at places shown with all leads and lifts, cost of all labour, hire and fuel charges for all tools and plants employed and all other incidental charges etc., all complete and as directed.	SQ.M	202.00		
2	**EARTH WORK**				
2.1	Earthwork in Excavation, manually or by mechanical means, for foundation of walls, column footings, raft, foundations, plinth beams, steps, water tanks, cess pits, etc., in all types of soil including soft or hard moorum, boulders (upto 0.10 cum) shoring the sides wherever necessary, bailing/pumping out sub-soil /rain water and keeping the foundation trenches and pits dry including filling back the trenches by selected and approved quality excavated earth in layers not exceeding 20 cm., wateredand consolidated, spreading surplus excavated earth within plot and carting away surplus materials out of site, all complete as directed. Rate to inlude necessary cost towards transportation of remaining material rendered surplus out side the Bank's premises/site and disposing the same to approved municipal yard with	CU.M	77.00		

	all lead and lift including labour for loading, unloading surplus excavated earth complete as directed by the Bank.				
	EXCAVATION IN SOFT ROCK				
2.2	Earthwork in Excavation, manually or by mechanical means, for foundation in soft rock, old cement / lime mortor Brick/RCC/Stone masonary foundation including removing the excavated material from foundation, stacking serviceable material beyond building area as directed at site. The Rate to include dewatering subsoil/ rain water, preparing the bed for the foundation, shoring sides wherever required and back filling foundation trenches with available approved quality surplus excavated material in layers in exceeding 20 CM, ramming, watering complete. Rate should also include disposal of surplus excavated material/debris to approved munuiciple dumping yard with all lead and lift, including cost of transportation etc. complete as directed by Engineer-in-Charge.	CU.M	10		
	EXCAVATION IN HARD ROCK				
2.3	Earth work in excavation in Hrad Rock by mechanical means (Hydraulic excavator) / manual means by chiselling, wedging, line drilling etc. over areas including foundations, trimining & levelling the bed, removing excavated material beyond building area upto 2.0 m. depth, stacking the material as directed including dewatering, back filling of trenches using available earth murum raming and watering complete and disposing off surplus rock material within the site as per direction of the Bank. Rate to include all lead, lift and cost of transportation within the campus/premises/site.	CU.M	10.00		

	EART FILLING WITH BROUGHT OUT EARTH				
2.4	Filling with approved quality selected earth / hard murrum brought from outside (at contractor's cost) and filling the same in plinth, plinth protection, trenches, around drains, boundary walls, low lying areas for levelling etc. including removing debris, organic matter, etc and spreading in layers not exceeding 20 cm in depth, consolidating each deposited layer by ramming (mechanically or manually), watering, dressing, de-watering, if required, to keep site dry while back filling all complete as per specifications and instructions of Engineer In Charge. The rates includes transportation of materials, taking permission of local authorities and paying royalty etc. complete as per the direction of Engineer-in-Charge.	CU.M	172.00		
3	**PRE CONSTRUCTION ANTI-TERMITE PROTECTION**				
	Carrying out pre-construction Anti-termite treatment using approved Chemical IMIDACLOPRID or equivalant at various stages of construction as per IS 6313:2013 and as recommended by the chemical manufacturer to safeguard the building against termite including execution and submission of guarantee for a period of 10 years (On non judicial stamp paper of required value as per format approved by Bank) against any subterranean pests infestation. The work should be got executed through specialised agenceis approved by the Bank. a 1st stage: Treatment to soil below foundation PCC. b 2nd stage: Treatment to soil below grade slab / plinth level slab. c 3rd stage: Treatment of soil along external perimeter of building including Plinth protection. **Mode of Measurements:** Plinth area of the	SQ.M	149.00		

	building shall be measured. **Approved Agencies:** PCI/ PECOPP/ GODREJ HI-CARE or Equivalent approved by the Bank.				
4	**PCC-WORKS (PCC: Volumetric Machine Mix)**				
4.1	Providing and laying in position machine mix PCC (plain cement concrete) under foundation, plinth protection, floor slabs, grade slabs, coping, sill concrete etc. including transporting, laying, compacting, finishing the surface in line, level and plumb as per requirement and curing etc. complete. The Rate to include necessary formwork, centering, shuttering, complete in all respects and execution of work at all heights and location with required leads and lifts complete as directed by Engineer in charge.				
A	PCC 1:4:8 using 40 mm and downgrade metal For Column footings, Water sump footing, Septic tank footing, staircase, entrance stairs and Ramp etc.,	CU.M	8.00		
B	PCC 1:5:10 using 40 mm and downgrade metal For Under main Building.,	CU.M	22.00		
5	**RCC WORKS**				
	PREAMBLE: Contractor to ensure the following while quoting their rates for all Concrete/RCC work				
	Rate for all RCC Items should be quoted inclusive of cost Centering, Shuttering, Scaffolding and execution of work at all depths/heights complete. All shuttering material used for concreting / RCC Work should be of good quality using waterproof ply/Steel plates etc. to ensure smooth finish as per sample approved by the Bank/Architects.				
	The scope of work under the items includes execution of work at all heights and location including all shapes, curved walls etc. complete.				

	In case there is bulging / minor honey combing is noticed after removal of shuttering, the contractor will have to rectify the work at his own cost. The decision as to what constitute minor honey combing is left to the Engineer in charge.				
	The Contractor will be responsible for arranging "design of concrete mix" through approved Institute at their own cost within the quoted rates only and will submit the Test reportd to Bank/Architect for approval. No extra payment shall be eligible on this account.				
	Unless otherwise specified, only River Sand should be used. If the silt content is more then permissible limits, contractor will arrange washing of sand in rotary screw type washing machines within quoted rates and no extra payment shall be eligible for thge same.				
	The flooring, raft & slab curing is to be done by ponding method only.				
	Checking of top level of slab should be done at every floor & it should be within IS tolerance limit / client requirement.				
	Frequency of testing for all materials like sand, aggregates, cement, steel should be as per IS standard.				
	The use of admixture, fly ash & crush sand should be as per concrete mix design.				
	Unless otherwise specified the cement to be used shall be Ordinary Portland Cement (OPC-53) of Approved make along with proportions of fly ash.				

	REINFORCED CEMENT CONCRETE (M25 GRADE)				
5.1	Reinforced Cement Concrete **M 25 GRADE MIX 1: 1: 2** to the required strength as per SS and IS-456:2000 using 20mm size hard granite machine crushed graded metal (Coarse aggregate) and sand from approved quarry, and placing necessary reinforcement in position including cost and conveyance of all materials like cement, Sand, coarse aggregate, and water to work site, seigniorage charges on all materials, including shuttering and MS scaffolding with steel props and steel plate as per the approved shuttering plan and other accessories as per norms and stability calculations, all taxes and all operational, incidental, labour charges, mixing concrete, laying and lift charges, vibrating, curing etc., complete for finished item of work as per standard specification but excluding cost of steel reinforcement and its fabrication charges etc., complete for finished item of work as directed by the department/Architect.NOTE: The concrete shall attain the strength of 250 N/MM2 in 28 Days				
A	**FOOTINGS**	CU.M	30.00		
B	**PLINTH BEAMS**	CU.M	8.00		
C	**COLUMNS**	CU.M	15.00		
D	**ROOF BEAMS**	CU.M	13.00		
E	**SLABS**	CU.M	28.00		
F	**STRONG RROM WALLS**	CU.M	12.00		
G	**LINTELS**	CU.M	1.00		
H	**STAIR CASE WAIST SLAB**	CU.M	1.00		
I	**STAIR CASE STEPS (triangular**	CU.M	2.00		

	portion above waist slab)				
J	**CHAJJAS**	CU.M	5		
K	**WATER SUMP WALLS**	CU.M	3.00		
J	**SEPTIC TANK WALLS**	CU.M	3.00		
M	**WATER SUMP SLAB (BOTTOM & TOP)**	CU.M	1.00		
N	**SEPTIC TANK SLAB (BOTTOM & TOP)**	CU.M	1.00		
6	**STEEL REINFORCEMENT**				
	Supplying and fixing in position Tested Quality Fe500D grade TMT Steel reinforcement bars conforming to IS: 1786-2008 of any dia. for R.C.C. work at all levels as per details structural drawings including straightening, cutting, bending, placing in position and binding with two strands of annealed steel wire 0.9 to 1.6 mm thickness, twisted tight at every intersection of bars including necessary overlapping / Welding /providing sockets at joints as required complete, at all levels in complying with standard specifications and as per direction of Bank. Mode of measurements : Length of reinforcement bars shall be actually measured at site and its weight will be calculated considering prescribed "weight per meter" for respective dia. bars as per relevant IS code irrespective of actual weight. No rolling margins and wastage will nadmissible for the purpose. Approved Make : SAIL / TATA / VIZAG or Equivalent approved by the Bank.	MT	11		

7	**BRICK WORK**				
7.1	Providing and constructing 230mm thick Brick masonry walls in Super structure using Tested Quality locally available approved quality Class designation 50 Bricks, well (Kiln/Chimney) burnt, uniform size and colour having average crushing strength not less than 50 kg/cm2 in CM 1:5 in walls, shaft walls, parapets, etc. in proper line, level and plumb including striking out / raking out joints, curing, necessary scaffolding, etc. complete at all heights and levels as per the approved drawing and as per instructions of the Architect / Engineer-in-charge.	CU.M	49.00		
7.2	Providing and constructing 115mm thick Brick masonry partition walls in Superstructure in CM 1:4 using Tested Quality locally available approved quality Class designation 50 Bricks , well (Kiln/Chimney) burnt, uniform size and colour having average crushing strength not less than 50 kg/cm2. Rate includes providing RCC patli beam 100mm thick including providing with 2 nos. 8 mm dia TMT bars and 8 mm dia TMT links at 300 c/c in cement concrete of mix M 20 at mid-height (height between two patli not exceeding 1.20m), required formwork etc. in proper line, levels and plumb including raking out joints, curing, necessary scaffolding, etc. complete at any floor height and levels as per the approved drawing and as per instructions of Architect /Engineer.	SQ.M	15.00		

8	**FINISHING**				
8.1	Providing applying in position of Plastering with12 mm (average) thick in Two coats 8mm thk in CM (1:6)prop and top coat 4mm thk in CM (1:4)prop for Ceiling, in proper line and level using approved quality silt free natural sand (Fine or Coarse as directed) at all heights and locations including necessary scaffolding, curing etc. complete as directed by the Engineer-incharge. Rate includes making Flush/raised/sunk or moulded bands of any width, recesses, making grooves etc. complete as per Architectural drawings and no extra payment shall be considered for the same.	SQ.M	173.00		
8.2	Providing applying in position of Plastering with16 mm (average) thick in Two coats 12mm thk in CM (1:6)prop and top coat 4mm thk in CM (1:4)prop for Internal walls & Columns, in proper line and level using Crushed stone sand and adding polypropylene fibre of approved quality in desired quantity per bag of cement as per manufacturers specifications complete. Rate includes providing chicken mesh to all joints of RCC members with Brick walls in all positions in proper line, level & plumb at all levels and heights with necessary scaffolding, cleaning of surfaces, raking out joints, roughening of surface, curing etc complete as directed at site. Rate includes making Flush/raised/sunk or moulded bands of any width, recesses, making grooves etc. complete as per Architectural drawings and no extra payment shall be considered for the same.	SQ.M	280.00		

8.3	Providing applying in position of Plastering with20 mm (average) thick in Two coats, 16mm thk in CM (1:6)prop and top coat 4mm thk in CM (1:4)prop for External walls & Columns, in proper line and level using Crushed stone sand and adding polypropylene fibre of approved quality in desired quantity per bag of cement as per manufacturers specifications complete. Rate includes providing chicken mesh to all joints of RCC members with Brick walls in all positions in proper line, level & plumb at all levels and heights with necessary scaffolding, cleaning of surfaces, raking out joints, roughening of surface, curing etc complete as directed at site. Rate includes making Flush/raised/sunk or moulded bands of any width, recesses, making grooves etc. complete as per Architectural drawings and no extra payment shall be considered for the same.	SQ.M	254.00		
9	**FLOORING**				
9.1	**GRANITE FLOORING**				
A	Providing and laying in position 18mm ± 2mm thick machine cut pre-polished Granite stone flooring and skirting in approved colour, shade, design and patterns as per architectural drawings laid over 20 mm (average) thick cement mortar 1:6 (1 cement : 6 coarse sand) bedding fixed and jointed with neat cement slurry and filling joints using white cement slurry admixed with pigment of matching shade or epoxy based joint filling compound of approved make including grinding, mirror polishing, curing, nosing, making grooves etc. complete as specified in the Architectural drawings and as directed by the Engineer-in-Charge. **(Basic Rate of Granite : Rs.1650 SQMT) (Basic rate means Excluding GST, Transportation and Loading and Unloading charges)**	SQM TS	6.00		

B	Providing and fixing with polished granite slabs of 20mm thk for Staircase flooring (risers and treads) as per design set over a base of CM(1:5) prop. Jointed neatly with cement puttty to full depth mixed with matching colour pigment full and half rounding and polishing on edges and including cost and conveyance of all materials seignorage fee, all taxes, water to work site and all operational, incidential labour charges such as MS scaffolding, mixing, motor, lift charges, curing etc. complete for finished item of work as directed by the Engineer in charge/Architect. **(Basic Rate of Granite : Rs.1650SQMT) (Basic rate means Excluding GST, Transportation and Loading and Unloading charges)**	SQ.M	17.00		
9.2	**GRANITE CLADDING TO STAIRCASE WALLS**				
	Providing Granite Cladding to columns, walls with polished granite slabs of 20mm thk. as per design set over a base of CM(1:4) prop. Jointed neatly with cement puttty to full depth mixed with matching colour pigment full and half rounding and polishing on edges and including cost and conveyance of all materials seignorage fee, all taxes, water to work site and all operational, incidential labour charges such as scaffolding, mixing, motor, lift charges, curing etc. complete for finished item of work as directed by the Engineer in charge/Architect. **(Basic Rate of Granite : Rs.1650 SQMT) (Basic rate means Excluding GST, Transportation and Loading and Unloading charges)**	SQM TS	15.00		

9.3	**600X1200 MM GLAZED VITRIFIED TILE (GVT) FLOORING.**				
	Providing and laying Glazed vitrified floor tiles of size 600 MM X 1200 MM (10/12 thickness to be specified by the manufacturer), with water absorption less than 0.08% and conforming to IS : 15622, of approved make, in all colours and shades, laid on hacked floor with Tile Adhesive (LATICRATE - 290) , including Skirting if any required during laying and finishing complete.The work shall be carried out as per the directions of the Architect. Including filling the joints using "+" shaped 3 mm wide plastic spacers at corners (to be removed before jointing) during fixing of Vitrified tile in floor to achieve a perfectly straight joint line, using epoxy grout mix of 0.70 kg of organic coated filler of desired shade (0.10 kg of hardener and 0.20 kg of resin per kg), including filling / grouting and finishing complete. The work shall be carried out as per the directions of the Architect. The rate shall be inclusive of all the material ,labour, hardware, transportation necessary required for the complete execution of the item as directed by the architect. **(BASIC RATE OF THE TILE SHALL BE RS.645 Per Sqmtr) (Basic rate means Excluding GST, Transportation and Loading and Unloading charges)**	SQ.M	122.00		
9.4	**PCC BELOW PARKING TILES**				
	Plain Cement Concrete (1:5:10) proportion nominal mix (cement: fine aggregate: Coarse aggregate) **for under Parking tiles** using 40mm size hard granite metal from approved quarry including cost and conveyance of all materials like cement, sand, coarse aggregate, water etc. to site, including seigniorage charges, sales & other taxes on all materials and including all charges for machine mixing, laying concrete in	CU.M	45		

	foundations and under flooring bed, ramming in 10 cm layer finishing top surface to the required level curing etc., complete for finished item of work.				
9.5	**PARKING TILES**				
	Designer Parking with tiles in cement concrete M 30 GRADE of size 16"x16" of 1st quality of super company make or equivalent of 25 to 30 mm thick of approved colour not less than with compressive strength of 450kg/cms2 over a base coat in C.M (1:6) , 18 mm thick incluidng applying neat cement slurry honey like consistency spread at the rate of 3.30kg/Sqm and filling the joints with white cement mixed with pigments of matching shade laid over existing concrete bed/RCC slab including cost of base coat, cost and conveyance of all materials, excluding CC bed/RCC slab, labour charges for mixing cement mortar , laying of tiles to required slopes/levels, curing etc complete for finished item of work for all parking area BASIC RATE OF THE TILE SHALL BE RS : 550 SQMTS HINDUSTAN, CLASSIC.	SQ.M	56.00		
10	**GRANITE JAMBS FOR WINDOWS**				
10.1	Providing & Fixing in position 19mm thick machine cut, **Telephone Black Mirror polished Granite** as per the approved sample for **window cills, jambs or any other specified** etc. as per the drawing laid to the required level & line including cutting of stone to the required size & shape, edge polishing / chamfered edges, surface preparation including cement backing with 1:1 cement grout, filling & finishing the joints with cement & approved colour pigments, cutting, mirror polishing, curing, cleaning etc complete as per the instructions of the Architect. **(Basic cost of Granite Rs.1650 per sqmts) (Basic rate means Excluding GST,**				

	Transportation and Loading and Unloading charges)				
A	300MM WIDE FOR 230MM THK WALLS	R.M	27.00		
B	150MM WIDE FOR 115MM THK WALLS	R.M	12.00		
11	**UPVC WINDOWS**				
11.1	Providing and fixing factory made unplasticised polyvinyl Chloride (UPVC) white colour sliding glazed window upto 2.40 m in height dimension comprising of UPVC multi-chambered frame with in-built roller track and sash extruded profiles duly reinforced with 1.60 ±0.2 mm thick galvanized mild steel section made from roll forming process of required length (shape & size according to UPVC profile), appropriate dimension of UPVC extruded glazing beads and UPVC extruded interlocks, EPDM gasket,wool pile, zinc alloy (white powder coated) touch locks with hook, zinc alloy body with single nylon rollers (weight bearing capacity to be 40 kg), G.I fasteners 100 x 8 mm size for fixing frame to finished wall and necessary stainless steel screws etc. Profile of frame & sash shall be mitred cut and fusion welded at all corners, including drilling of holes for fixing hardware's and drainage of water etc. After fixing frame the gap between frame and adjacent finished wall shall be filled with weather proof silicon sealent over backer rod of required size and of approved quality, all complete as per approved drawing & direction of Engineer-in-Charge.Two and half track two panels sliding window made of frame 52 x 44 mm & sash 32 x 60 mm both having wall thickness of 1.9 ± 0.2 mm With single glazing with 6mm thick Glass of appropriate dimension.				
A	SLIDING WINDOW (1200-1500mmX1200mm) 3 TRACK (2 FOR OPENING & 1 FOR MOSQUITO NET)	SQ.M	8.00		

	WITH 6MM PLAIN GLASS				
B	VENTILATORS (600-1500mmX600mm) VENTILATORS WITH EXASUT FAN PROVISION	SQ.M	1.00		
12	**Providing and Fixing in position** interlocking rolling shutters of approved make of 18 guage 75mm wide cold rolled MS lathe interlocking, including top cover, spring, axles, guide rails, tees, iron pulleys, bearings, handles, etc., and shutters of push and pull arrangements, with holding down bolts embedded in CC 1:2:4 including two coats of enamel paint over one coat of primer etc.,	SQ.M	23.00		
13	**Providing and Fixing in position collapsible steel shutters** with vertical channels 20x10x2 mm braced with vertical Channles 20x5 mm size with top & bottom rails of T-Iron 40x40x6 mm with 38 mm dia steel pulleys complete with bolt**,** nuts, locking arrangement, stoppers handles including applying a priming coat of red lead paint.	SQ.M	9.00		
14	**SS RAILING**				
14.1	**SS Railing for Staircase :** Providing and fixing in position Stainless Steel Railing with 1 m height comprising of 50mm dia handrail, fixed on 25/32mm dia round or Square SS pipe balusters placed at about 900 to1000mm c/c centre to centre (spacing may vary as per site conditions) including providing 3 Nos. of 16 mm dia parallel mid rails connected at the side of baluster with suitable SS fixtures. The balustrade would be fixed onto floor with casted base plate of minimum 6mm thickness anchored down on slab using Hilti fasteners. Base plate shall be concealed with suitable S.S. cover cap so that the mounting anchor fasteners are not visible after installation. Wall thickness of all pipes shall be taken as 1.5mm along	RM.T	6.00		

	with all visible components developed in High Grade S.S. Wherever required, joints to be filled with bushings for extra strength. Rates includes welding, grinding, buffing, polishing and making curvature (wherever required) fixing the railing with necessary accessories & stainless-steel dash fasteners, stainless steel bolts etc., of required size, on the top of the floor or the side of waist slab with suitable arrangement as per approval of Engineer/Architect. **Note : For payment purpose, length of handrails will be taken (between two outer balusters) excluding the length of railing beyond balustrades. Using Stainless Steel Grade 316 Sections.**				
15	**WATER PROOFING ON TERRACE**				
	Providing waterproofing on TERRACE floor and on PARAPET walls upto 300mm. by chemical method as follows: Brushing, cleaning & hacking the surface area and mixing and applying two coats of ready to use two component acrylic polymer modified cementations, waterproof coating in 2 layers one after the other with 1mm tk with air cure of 4 hours for first cost and second coat followed with water curing for 48 hours as per manufacturers' specification. Including providing ten years guarantee against leakage on a requisite stamp paper complete. The Water proofing also to include 2 coats of waterproofing plaster done with 12 mm aggeregates finishing in CM1:3 mixed with waterproofing compound, finishing with Smooth (Kalai) finish to required slope with an avg thk of 40mm.Ponding test to be done for 24 hours . The rate shall be inclusive of all the material ,labour, hardware, transportation necessary required for the complete execution of the item as directed by the architect.	SQ.M	176.00		

	FOSROC,LATICRATE,PIDILITE DR FIXIT. **NOTE : Only Slab area shall be considered for Measurements, walls area will not considered.**				
II	**TOILET WORKS**				
1	**WATERPROOFING IN TOILETS**				
	Providing waterproofing in Toilets, urinals, wash basin areas, on floor before plumbing and on walls upto 600mm. by chemical method as follows: Brushing, cleaning & hacking the surface area and mixing and applying two coats of ready to use two component acrylic polymer modified cementations, waterproof coating in 2 layers one after the other with 1mm tk with air cure of 4 hours for first cost and second coat followed with water curing for 48 hours as per manufacturers' specification. Including providing ten years guarantee against leakage on a requisite stamp paper complete. The Water proofing also to include 2 coats of waterproofing plaster done with 12 mm aggeregates finishing in CM1:3 mixed with waterproofing compound, finishing with rough finish to required slope with an avg thk of 40mm.Ponding test to be done for 24 hours before plumbing work can begin. The rate shall be inclusive of all the material ,labour, hardware, transportation necessary required for the complete execution of the item as directed by the architect. FOSROC,LATICRATE,PIDILITE DR FIXIT. **NOTE : Only Slab area shall be considered for Measurements, walls area will not considered.**	SQM TS	11.00		

2	**FLOORING IN TOILETS**				
2.1	Supply, providing and laying of 1st quality anti-skid Vitrified tiles for Flooring IN BRANCH TOILETS of approved colour and design 10 mm thick floor tiles of approved make and 300 x 300 size fixed over 20 mm thick cement base mortar 1:6. The scope work is inclusive of providing proper slopes for better drainage of water to the traps, with 3mm spacers, filling the joints with Epoxy Grout and matching pigment etc com-plete in all respects as directed by Architect. **Basic rate of Tiles not less than rs 50/SFT (Basic rate means Excluding GST, Transportation and Loading and Unloading charges) (FOR BRANCH TOILETS)**	SQM TS	4.00		
2.2	Supply and fixing of BRANCH TOILETS Dadoing wall tiles of 1st quality glazed Vitrified tiles of 300mmx600mm size or approved size of approved col-our, design and make over a base plaster of 15mm thick on the brick work and 12 mm thick cement plaster 1:4 levelling course with 3mm plastic spacers filling / grouting the joints with Epoxy Grout mixed with approved matching colour with tiles at all levels with all required tools, plants, materials and labour required to complete the work in all respects as directed by Bank(PVC corner- Arpitha make beading to be provided in all the cor-ners) . **Basic rate of Tiles not less than rs 50/SFT (Basic rate means Excluding GST, Transportation and Loading and Unloading charges)(FOR BRANCH TOILETS)**	SQ.M	7.00		

3	**TOILET DOORS**				
	Providing and fixing of Toilet doors with the following specifications- Door Frame : Solid PVC Door frame of size 90 X 40 mm. The door frame shall be fixed to the wall by using 80mm long screws through the frame with the help of PVC fasteners of 3 no's to be provided for each vertical member as per manufacturers specification. Door Shutter : Solid PVC Door Shutter of 35mm thk fixed to frame with 3 nos ss butterfly hinges as per the directions. The rate shall be inclusive of all the material ,labour, hardware, transportation necessary required for the complete execution of the item as directed by the architect.	SQ.M	3.00		
4	**WASH BASIN COUNTER IN GRANITE**				
	Providing and fixing Granite Counter in 36 mm thick comoflanged machine cut and mirror polished Granite slabs of approved colour in 600mm width, length upto 2000mm, set in 20 mm thick cement mortar 1:4, joint finished with neat cement slurry with matching colour including dressing the nosing and sides to the required shape etc. as directed with sizes as per drawing for wash basin counter, laid over 36 mm thk POLISHED GRANITE supports. Rate to include cutting for washbasins of required size, final mirror polish after installation. (**Basic Rate of Granite : Rs.1650 per SQMT)**	RMTS	5.00		
5	**EXTENDED WALL HUNG WATER CLOSET TWO PIECES FOR BRANCH TOILETS**				
	Providing & Fixing white vitreous china two picece wall hung extended EWCs with cistern ,seat and soft closing lid,(handle lever), twin flush fittings with C.I flush bend with fittings & C.I. brackets, 40 mm flush bend, Braided connector pipe to connect to bid cock overflow arrangements	NOS	2.00		

	with specials of standard make and mosquito proof coupling of approved design complete including painting of fittings and brackets, cutting and making good the walls and floors wherever required.				
	The rate shall include white solid plastic seat and soft closing lid - wc p trap, connecting to the soil pipe.The rate shall be inclusive of all the material ,labour, hardware, transportation necessary required for the complete execution of the item as directed by the architect. **Basic rate of WC : RS :7500.00**				
6	**COUNTER TOP WASH BASIN FOR BRANCH TOILETS**				
	Providing and fixing Counter top wash basin of approved make commercial size of approved make & design including -i) Heavy CI brackets as required.ii) 32 mm CP brass waste coupling with 32 mmCP brass heavy bottle trap (detachable type) with. CP brass extension piece & wall flange, reducers (75/50 or 40 mm), elbows, cleanouts,tees etc including making holes in RCC/Civil works, connecting to sleeves (where left) in floor etc complete. Pipes to be of 6 bar variety with solvent joint & will be measured (running length) & paid under separate item. iv) 15 mm CP brass heavy fancy pillar angle cock with CP connector of required length connecting to.v) Angle Valve with wall flange including jointing using Teflon tape, vi) Suitable stop cock etc. complete.WHB (for circular /oval basin) below the counters as required including brackets as required.The rate shall be inclusive of all the material ,labour, hardware, transportation necessary required for the complete execution of the item as directed by the architect. **Basic Cost of the Washbasin should be Rs.5500.00, Basic Cost of the Angle cock should be Rs.1500.00 and Basic Cost of**	NOS	2.00		

	the Stop cock should be Rs.500.00				
7	**HEALTH FACUET**				
7.1	Providing & fixing C.P. heavy quality health faucet [Jet Spray] with wall hook ,Braided connector pipe up to 600mm long including jointing using Teflon tape etc to bid cock. complete. The rate shall be inclusive of all the material ,labour, hardware, transportation necessary required for the complete execution of the item as directed by the architect.	Nos	2.00		
7.2	Providing & fixing C.P. heavy quality 2 way Bib cock, with wall flange, including jointing using Teflon tape etc.complete.The rate shall be inclusive of all the material,labour, hardware, transportation necessary required for the complete execution of the item as directed by the architect.	Nos	2.00		
8	**SS SINK**				
	Providing 600MMX450MM size S. S. Sink with drain board and The waste line to be connected through a Nahni Trap with necessary fittings. One jaguar Florentine C. P. Sink cock with swinging cast spout (no. 347) also to be provided.The rate shall be inclusive of all the material ,labour, hardware, transportation necessary required for the complete execution of the item as directed by the architect. **Basic rate of the Sink RS 7000 and Basic rate of the C.P Sink Cock RS 1500.**	NOS	1.00		
9	**SOAP DISH**				
	Providing & fixing of Soap Dish with all required Hardware of approved make. **Basic rate of the Soap Dish RS 1500.**	NOS	2.00		

10	**TOWEL RAIL**				
	Providing and fixing Chromium Plated Towel rail - 600mm long with brackets 20mm dia of approved make. **Basic rate of the Towel Rail RS 1500.**	NOS	3.00		
11	**TOWEL RING**				
	Supplying and Fixing of Towel ring of Chrome plated with necessary screws etc., complete including cost and conveyance of all materials, labour charges for finished item of work in all floors. **Basic rate of the Towel Rail RS 1000.**	NOS	3.00		
12	Providing & Fixing 6mm thick beveled edge mirror (Mirror of approved quality & as per specifications) with 6mm thick asbestos plain sheet backing fixed with SS Studs & washers & complete as per approval. Size 2100mmX900mm	SQM TS	2.00		
13	**WATER SUPPLY WORKS**				
13.1	Excavation of trenches of required width for pipes, including excavation for sockets, & dressing of sides, ramming of bottoms, depth upto 1.5m including getting out the excavated soil, & then returning soil as required, in layers not exceeding 20cm depth including consolidating each deposited layer by ramming, watering etc. & disposing of surplus excavated soil as directed outside the site to the approved dumping ground.in all kinds of soil except hard rock	Cum	5.00		
13.2	Providing & Fixing cpvc water pipes (I.S:4985-1981) of 10Kg / cm2 including all fittings e.g bends, junctions, elbow, f-tee, m-tee, offsets, access pieces etc. jointing with solvent cement including cutting holes in walls, floors excavation, refilling & disposal of surplus earth wherever required & making good.				

A	Providing and fixing chlorinated poly vinyl chloride(CPVC) pipes having thermal stability for hot and cold water supply, including all CPVC plain and brass threaded fitting, including fixing the pipe with clampsat 1m spacing. This includes jointing of pipes and fitting with one step CPVC solvent cement and cost of cutting chases and making good the same including testing of joints complete as per direction of Engineer in Charge.**20 mm OD pipe**	Rmt	20.00		
B	Providing and fixing chlorinated poly vinyl chloride(CPVC) pipes having thermal stability for hot and cold water supply, including all CPVC plain and brass threaded fitting, including fixing the pipe with clampsat 1m spacing. This includes jointing of pipes and fitting with one step CPVC solvent cement and cost of cutting chases and making good the same including testing of joints complete as per direction of Engineer in Charge.. **25 mm OD pipe**	Rmt	20.00		
C	Providing and fixing chlorinated poly vinyl chloride(CPVC) pipes having thermal stability for hot and cold water supply, including all CPVC plain and brass threaded fitting, including fixing the pipe with clampsat 1m spacing. This includes jointing of pipes and fitting with one step CPVC solvent cement and cost of cutting chases and making good the same including testing of joints complete as per direction of Engineer in Charge.**32mm OD**	Rmt	25.00		
D	Providing and fixing chlorinated poly vinyl chloride(CPVC) pipes having thermal stability for hot and cold water supply, including all CPVC plain and brass threaded fitting, including fixing the pipe with clampsat 1m spacing. This includes jointing of pipes and fitting with one step	Rmt	25.00		

	CPVC solvent cement and cost of cutting chases and making good the same including testing of joints complete as per direction of Engineer in Charge.**40mm OD**				
E	Providing and fixing chlorinated poly vinyl chloride(CPVC) pipes having thermal stability for hot and cold water supply, including all CPVC plain and brass threaded fitting, including fixing the pipe with clampsat 1m spacing. This includes jointing of pipes and fitting with one step CPVC solvent cement and cost of cutting chases and making good the same including testing of joints complete as per direction of Engineer in Charge.**50mm OD**	Rmt	15.00		
13.3	Supplying, fixing and testing of **CPVC Ball valves** screwed end of approved make including cost and conveyance of all materials to site, labour charges, sales and other taxes on all materials etc., complete for finished item of work for all floors. **20.05 mm dia valve**	Nos	3.00		
13.4	Supplying, fixing and testing of **CPVC Ball valves** screwed end of approved make including cost and conveyance of all materials to site, labour charges, sales and other taxes on all materials etc., complete for finished item of work for all floors. **25.40 mm dia valve**	Nos	1.00		
13.5	Supplying, fixing and testing of **CPVC Ball valves** screwed end of approved make including cost and conveyance of all materials to site, labour charges, sales and other taxes on all materials etc., complete for finished item of work for all floors. **31.75 mm dia valve**	Nos	1.00		

13.6	Supplying, fixing and testing of **CPVC Ball valves** screwed end of approved make including cost and conveyance of all materials to site, labour charges, sales and other taxes on all materials etc., complete for finished item of work for all floors. **50 mm dia valve**	Nos	1.00		
13.7	Providing & Fixing of **SINTEX PURE ANTIBACTERIAL Tank** of 2000 ltrs of the approved quality, & of the following capacity including making 230mm thk Brick solid supported base as per instructions & doing all connections as required to make the work complete as per the Directions of Architect. The rate shall be inclusive of all the necessary material, required hardware, labour, transportation & MS scaffolding necessary for the complete execution of the item.	Nos	1		
14	**DRAINAGE WORKS**				
14.1	Supplying, laying, **jointing and testing of SWG pipes** of ISI make conforming to ISI 651 & 4127 with airtight cement joints in CM (1.5:1) prop. Including excavation of trenches and socket pits in all soil (except rock requiring blasting) and refilling with watering and tamping etc to the required slope including cost and conveyance of all materials to site and all labour charges, all taxes on all materials etc., for finished item of work **200 mm dia upto 5' depth**	R.M	5		
14.2	**Supplying, laying, jointing and testing of SWG pipes** of ISI make conforming to ISI 651 & 4127 with airtight cement joints in CM (1.5:1) prop. Including excavation of trenches and socket pits in all soil (except rock requiring blasting) and refilling with watering and tamping etc to the required slope including cost and conveyance of all materials to site and all labour charges, all taxes on all materials etc., for finished item of work **150 mm dia upto 5' depth**	R.M	5		

14.3	**Supplying, laying, jointing and testing of SWG pipes** of ISI make conforming to ISI 651 & 4127 with airtight cement joints in CM (1.5:1) prop. Including excavation of trenches and socket pits in all soil (except rock requiring blasting) and refilling with watering and tamping etc to the required slope including cost and conveyance of all materials to site and all labour charges, all taxes on all materials etc., for finished item of work **100 mm dia upto 3' depth**	R.M	10		
14.4	**Constructing 904.0 mm (3'0") dia brick masonry inspection chamber** as per IS - 4111: Part-1:1986 with cement mortar (1:6) prop using 2nd Class Clay Bricks of 225 mm thick from approved source having a minimum crushing strength of 5 N/sq.mm including plastering with cement mortar (1:3) prop; ½" thick both inside and outside fitted with 20" dia RCC manhole covers and frames including excavating pits **up to a depth of 904 mm (3'-0")** in all sorts of soils (excluding rock) and laying cement concrete (1:4:8) 150 mm thick using 40 mm HBG Metal and P.C.C. (1:2:4) benching and channel 100 mm thick as per Standard specification and including cost and conveyance of all materials like cement, sand, bricks, water etc., to site, cost of seigniorage charges on all materials and all incidental and operational, labour charges like mixing cement mortar, constructing masonry, lift charges, curing etc., complete for finished item of work as per Standard specification.	Nos.	1		
14.5	Supplying and fixing 100 mm dia inlet - 75 mm (3") outlet PVC **floor traps** 1st quality ISI marked with C.P grating fixing with white cement as per the site requirements with standard practice including CP cockroach trap with gratting, black painted for all floors including cost and	Nos.	3		

	conveyance of all materials to site, labour charges etc, complete for finished item of work.				
14.6	Providing and doing core cutting in RCC slab of 100 to 150mm dia at given location as per instructions including necessary tools and machinaries, scaffolding, watering, rate also included carting away the debris from site time to time or disposing the material as directed and specified by the Architect as per requirements	Nos.	3		
14.7	Supplying, laying, fixing in position and testing on wall / under floor **Prince / Sudhakar PVC / SWR pipes & fittings** (as per ISI standards) 4 kg /cm2 for sanitary lines with specials of approved make as per manufactrurers specification including cutting the pipes to the required lengths, jointing with specials where ever required necessary chasing & restoring the original condition, testing, clamps if necessary cowls etc., complete for including cost and conveyance of all materials, all taxes and all labour charges for finished item of work. **100.0 mm (4") dia**	R.M	15		
14.8	Supplying, laying, fixing in position and testing on wall / under floor **Prince / Sudhakar PVC / SWR pipes & fittings** (as per ISI standards) 4 kg /cm2 for sanitary lines with specials of approved make as per manufacturers specification including cutting the pipes to the required lengths, jointing with specials where ever required necessary chasing & restoring the original condition, testing, clamps if necessary cowls etc., complete for including cost and conveyance of all materials, all taxes and all labour charges	R.M	15		

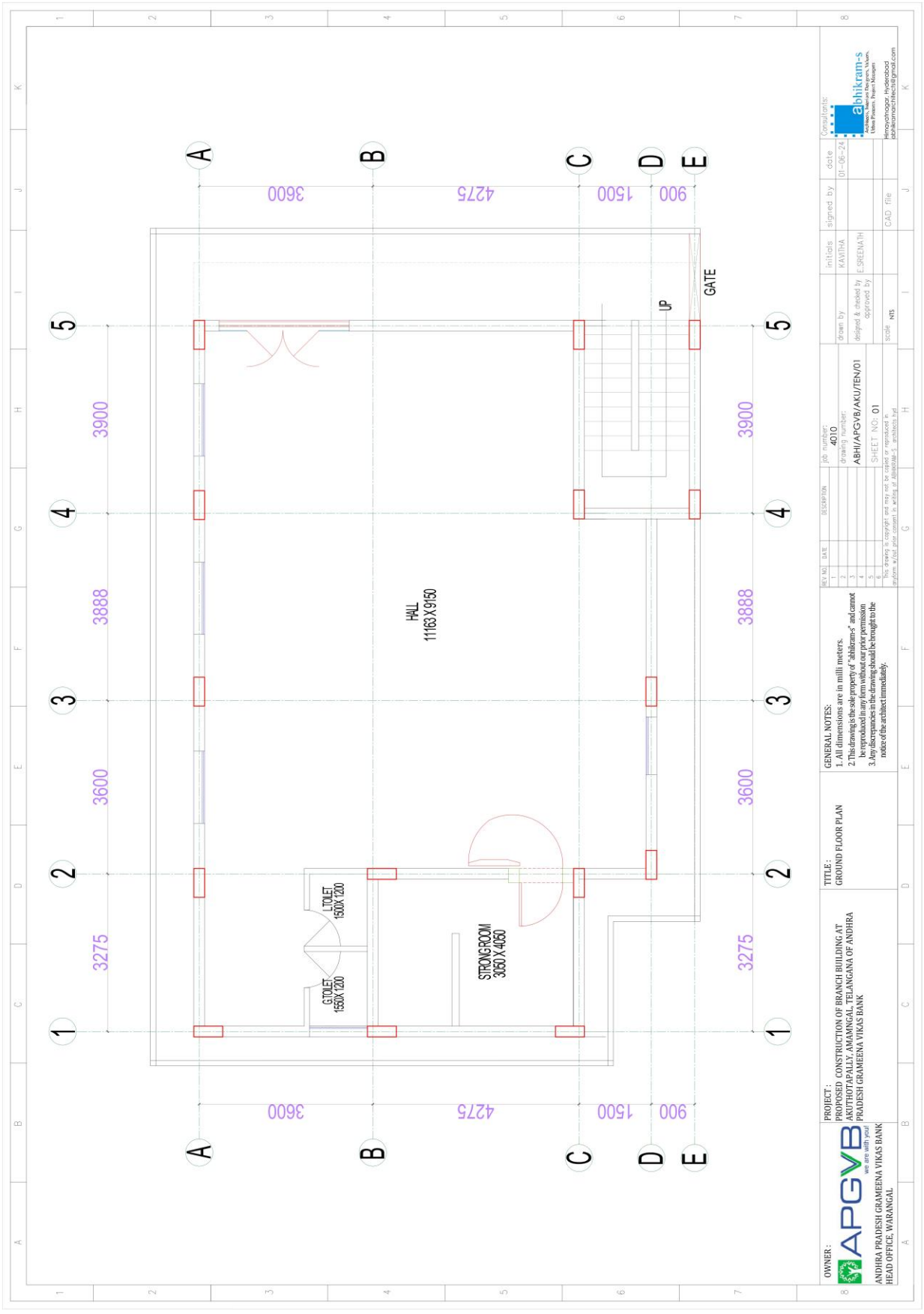
	for finished item of work. **75 mm (3") dia**				
14.9	Providing 100mm dia P.V.C rainwater down take pipes having wall thickness not less than 1.6mm and confirming to IS 4985, including cost of necessary P.V.C. Bends, shoes, iron clamps and all other accessories and fixing in position including cost and conveyance of all materials to site and labour charges for fixing at site etc., complete.	R.M	30		
III	**ELEVATION WORKS**				
1	**TEXTURE PAINT**	SQM	318.00		
	Providing & applying of Texture paint on exterior walls with a base coat of primer and applying texture of desired shade and pattern either with roller/ spray / trowel finish with two coats of painting with exterior grade weathersheild emulsion paint of approved brand and manufacture at all levels complete for 100% wash ability elasticity and water proofing of texture for longer & dust proof life of texture paint as per manufacturer specifications and direction of Architect. as per the drawing. The rate shall be inclusive of all the necessary material,required hardware, labour, transportation & MS scaffolding necessary for the complete execution of the item.				
2	**ARCHITECTURAL GROOVES**				
	Providing architectural grooves of size 12 x 12 mm finished in CM(1:3) proportion at the junction of RCC columns with brick masonry and beamswith brick masonry walls or as directed incl. cost of conveyance of all materials to site, seigniorage charges, all labour charges for all operations incl. MS scaffolding, curing etc. complete for all floors at all height.	Rmt	100		

IV	**COMPOUND WALL**				
1	**EARTH WORK**				
1.1	Earthwork in Excavation, manually or by mechanical means, for foundation of walls, column footings, raft, foundations, plinth beams, steps, water tanks, cess pits, etc., in all types of soil including soft or hard moorum, boulders (upto 0.10 cum) shoring the sides wherever necessary, bailing/pumping out sub-soil /rain water and keeping the foundation trenches and pits dry including filling back the trenches by selected and approved quality excavated earth in layers not exceeding 20 cm., wateredand consolidated, spreading surplus excavated earth within plot and carting away surplus materials out of site, all complete as directed. Rate to inlude necessary cost towards transportation of remaining material rendered surplus out side the Bank's premises/site and disposing the same to approved municipal yard with all lead and lift including labour for loading, unloading surplus excavated earth complete as directed by the Bank.	CU.M	37.00		
2	**PCC-WORKS (PCC: Volumetric Machine Mix)**				
2.1	Providing and laying in position machine mix PCC (plain cement concrete) under foundation, plinth protection, floor slabs, grade slabs, coping, sill concrete etc. including transporting, laying, compacting, finishing the surface in line, level and plumb as per requirement and curing etc. complete. The Rate to include necessary formwork, centring, shuttering, complete in all respects and execution of work at all heights and location with required leads and lifts complete as directed by Engineer in charge.				
A	PCC 1:4:8 using 40 mm and downgrade metal For Column footings, Water sump footing, Septic tank footing, staircase, entrance stairs and Ramp etc.,	CU.M	5.00		

3	**STONE WORK**				
	Construction of CRS Masonary in C.M(1:6) prop. using hard granite variety of stone available at site including cost and converyane of all materials and labour charges, seigniorage charges, curing, etc complete .	CU.M	22.00		
4	**BRICK WORK**				
	Providing and constructing 230mm thick brick masonry in CM 1:6 using approved quality table moulded bricks of minimum 50kg / Sq.cm including raking, curing,scaffolding and staging, lead and lift, in all situations such as walls / pillasters / pillars / stub supports etc. complete as per drawing and as directed at all levels and heights.	CU.M	22.00		
5	**Plastering in 2 coats** with a base coat of 20mm thk 16mm thk in CM (1:6) and 4mm thk in CM (1:4) prop for extenal wall with dubara sponge finishing including cost and conveyance of all materials seignorage fee, all taxes, water to work site and all operational, incidential labour charges such as scaffolding, mixing, motor, lift charges, curing etc. complete for finished item of work as directed by the Engineer in charge/Architect.	SQ.M	136.00		
6	**TEXTURE PAINT**	SQ.M	136.00		
	Providing & applying of Texture paint on exterior walls with a base coat of primer and applying texture of desired shade and pattern either with roller/ spray / trowel finish with two coats of painting with exterior grade weathersheild emulsion paint of approved brand and manufacture at all levels complete for 100% wash ability elasticity and water proofing of texture for longer & dust proof life of texture paint as per manufacturer specifications and direction of Architect. as per the drawing.				

	The rate shall be inclusive of all the necessary material,required hardware, labour, transportation & MS scaffolding necessary for the complete execution of the item.				
7	**MS FLATS**	kgs	288.00		
	Providing,Fabricating,aasembling,hoisting/ erecting and fixing in position MS Flats 100mm wideX4mm thk including cutting, welding, riveted,bolted the members as per the drawing and design. The structural frames shall be painted with 2 coats of Zinc chromate red oxide as primer and 2 coats of synthetic enamel paint of suitable shade and colour. The rate shall be inclusive of all the necessary material,required hardware, labour, transportation,Grinding, finishing edges & MS scaffolding necessary for the complete execution of the item.				
8	**MS GATE**	SQ.M	4.00		
	Providing MS gate as per drawings using 80mmX40mmX2.6mm thk hollow MS rectangular pipes tube horizontally and vertically as per including cutting bars, welding, fixing in position ,applying one coat of red oxide and enamel paint including cost & conveyance of all materials to site labour charges etc complete for finished item of work as directed by the Engineer-in-charge/Architect.				
V	**ELECTRICAL CONDUIT WORKS**				
1	25MM DIA PVC CONDUIT PIPE				
	Providing and laying in slab of 25MM DIA 2MM Thk PVC CONDUIT PIPE as per the drawing and directions of Architect. The rate shall be inclusive of all the necessary material,required hardware, labour, transportation & MS scaffolding necessary for the complete execution of the item.	RMT	40.00		

2	19MM DIA PVC CONDUIT PIPE				
	Providing and laying in slab of 19MM DIA 2MM Thk PVC CONDUIT PIPE as per the drawing and directions of Architect. The rate shall be inclusive of all the necessary material,required hardware, labour, transportation & MS scaffolding necessary for the complete execution of the item.	RMT	50.00		
3	75MM DIA 4 WAY PVC DEEP BOX				
	Providing and fixing of in slab of 75MM DIA 4 WAY PVC DEEP BOX as per the drawing and directions of Architect. The rate shall be inclusive of all the necessary material,required hardware, labour, transportation & MS scaffolding necessary for the complete execution of the item.	NOS	15.00		
4	100 MM DIA FAN BOX				
	Providing and fixing of in slab of 100 MM DIA FAN BOX as per the drawing and directions of Architect. The rate shall be inclusive of all the necessary material, required hardware, labour, transportation & MS scaffolding necessary for the complete execution of the item.	NOS	10.00		
	TOTAL RUPPES				
	DISCOUNT IF ANY				
	GRAND TOTAL				


A
B
C
D
E
1
2
3
4
5
3600
4275
1500
900
3900
3888
3600
3275
HALL
11163 X 9150
STRONG ROOM
3050 X 4050
L.T.TOILET
1500X 1200
G.TOILET
1500X 1200
UP
GATE
OWNER :
APGVB
we are with you!
ANDHRA PRADESH GRAMEENA VIKAS BANK
HEAD OFFICE, WARANGAL
PROJECT :
PROPOSED CONSTRUCTION OF BRANCH BUILDING AT
AKUTHOTAPALLY, AMANGAL, TELANGANA OF ANDHRA
PRADESH GRAMEENA VIKAS BANK
TITLE :
GROUND FLOOR PLAN
GENERAL NOTES:
1. All dimensions are in milli meters.
2.This drawing is the sole property of "abhikrams" and cannot be reproduced in any form without our prior permission
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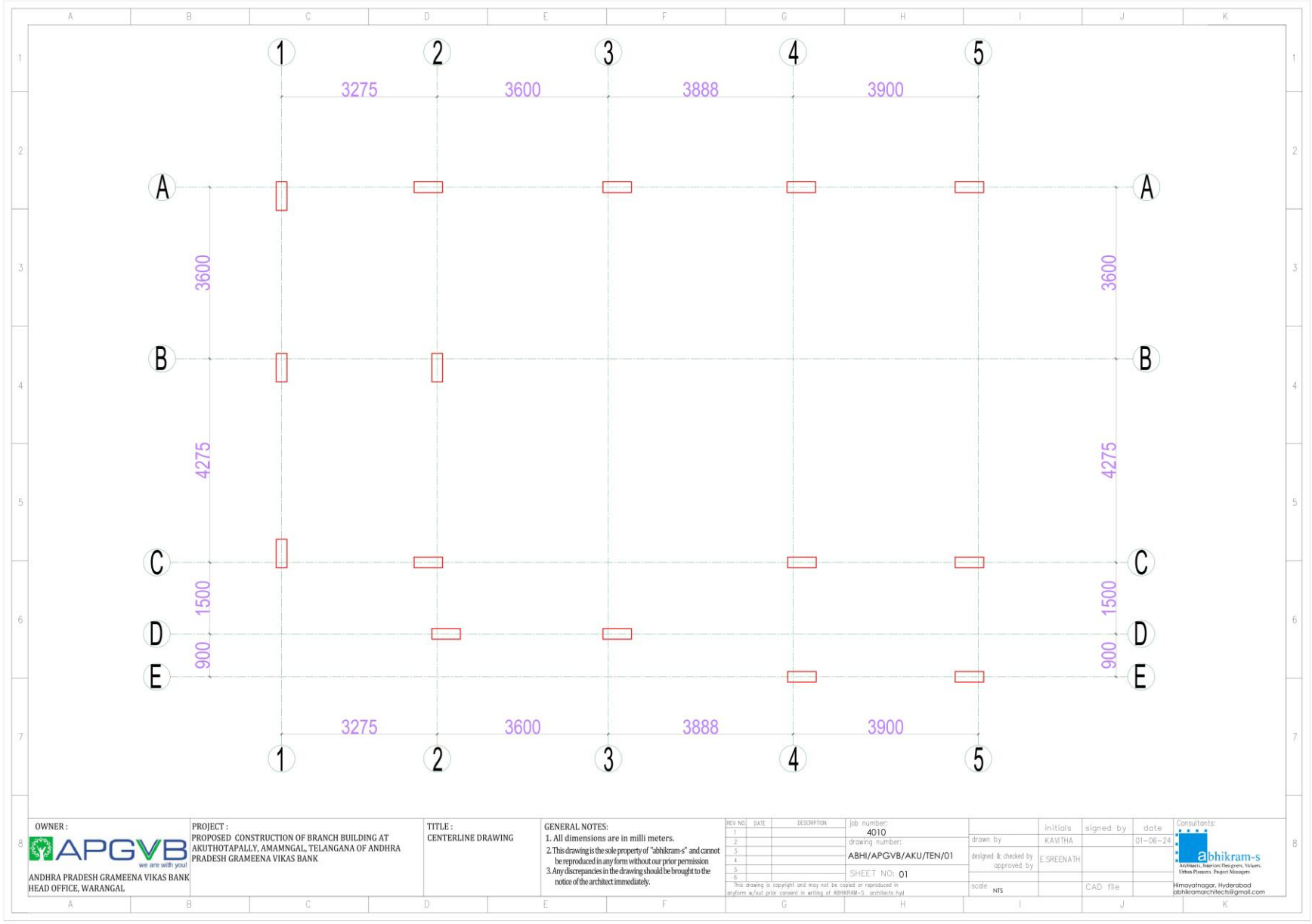
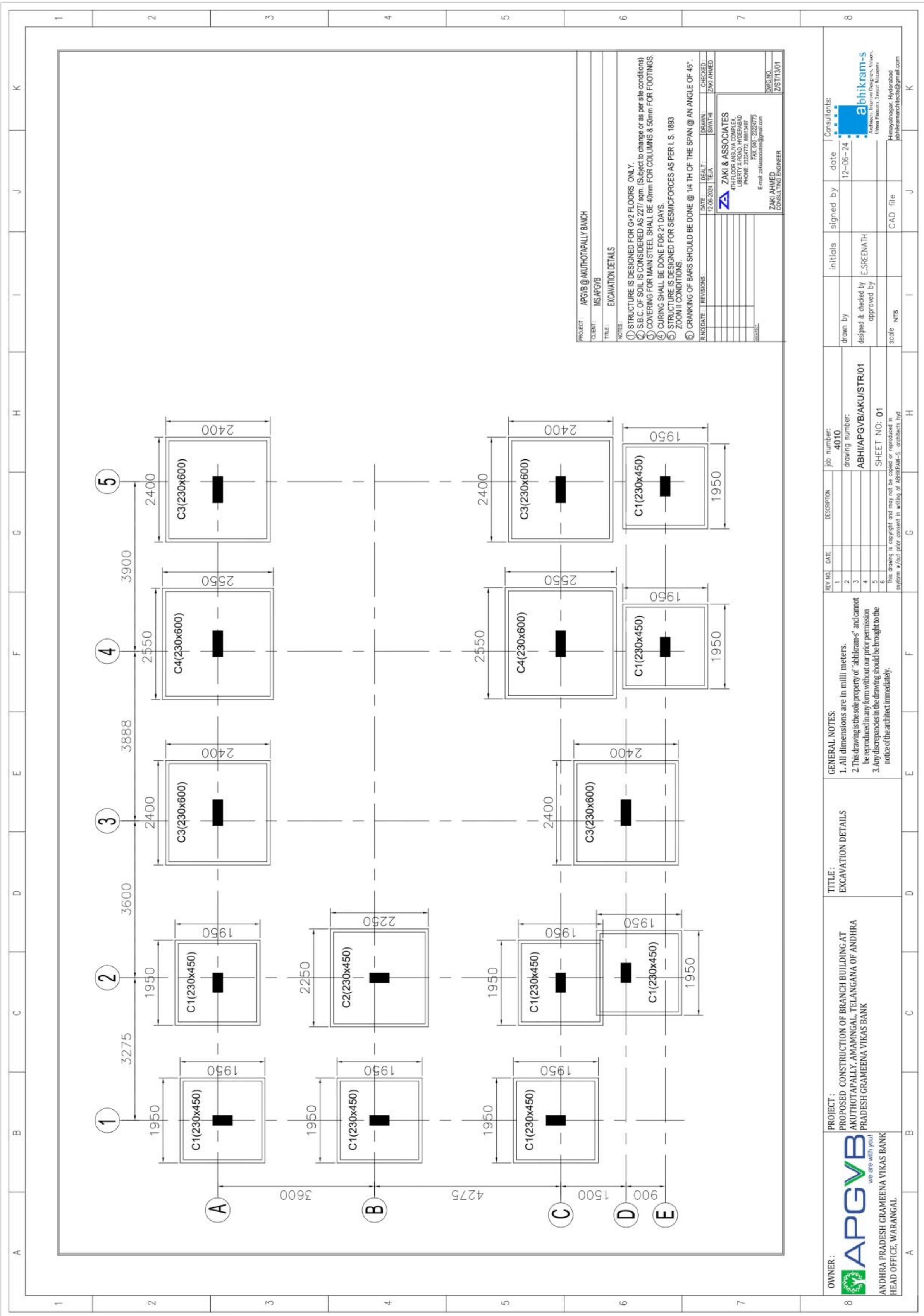
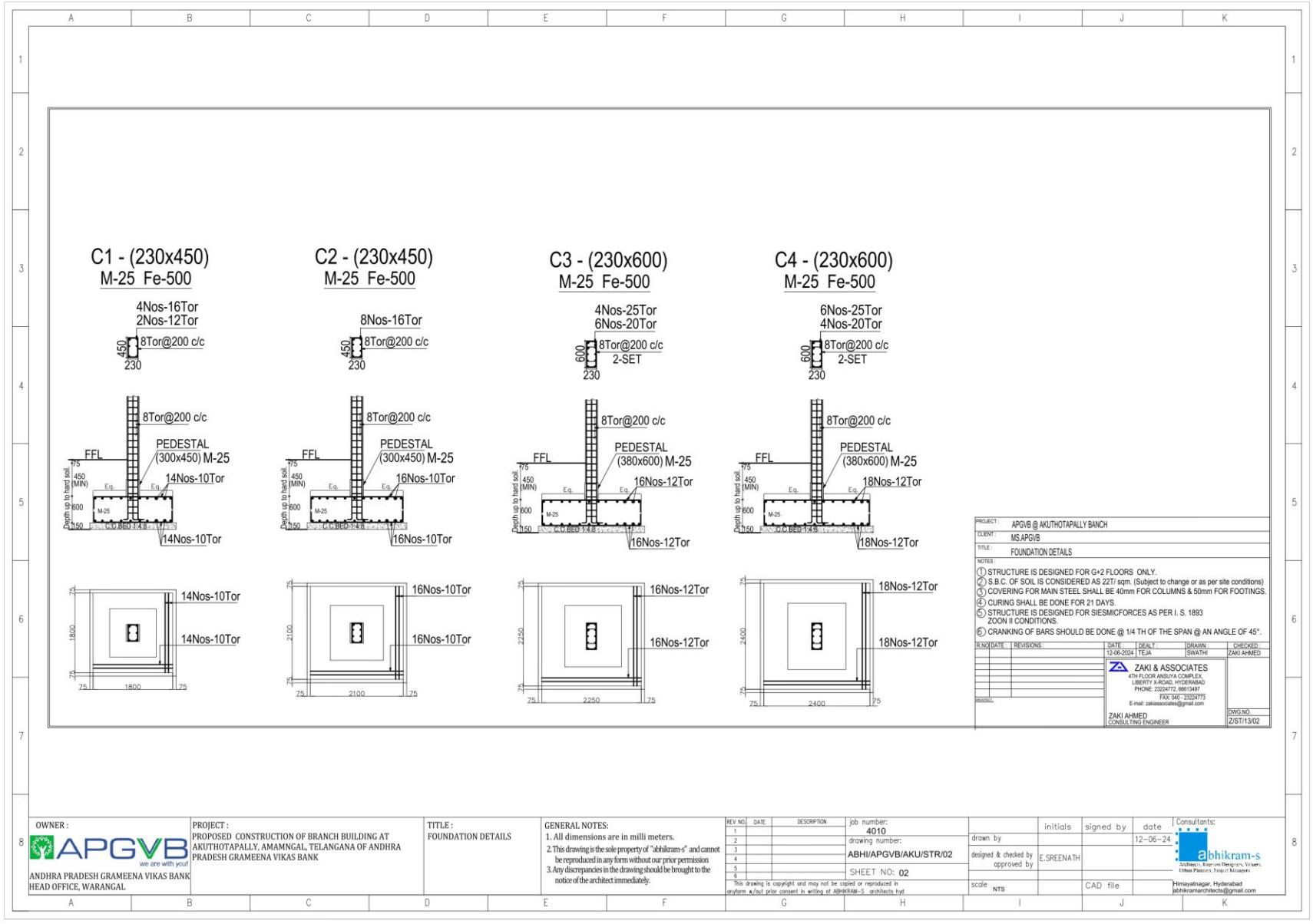
REV No.
DATE
DESCRIPTION
This drawing is copyright and may not be copied or reproduced in any form w'out prior consent in writing of abhikram-s architects pvt
job number:
4010
drawing number:
ABHI/APGVB/AKU/TEN/01
SHEET NO: 01
drawn by
initials
KAVITHA
designed & checked by
E.SREENATH
approved by
signed by
scale
NTS
CAD file
date
01-06-24
Consultants:
abhikram-s
Architects, Interior Designers, Valuers,
Urban Planners, Project Managers
Himayathnagar, Hyderabad
abhikramarchitect@gmail.com



Signature of contractor

APGVB HO WARANGAL


EXCAVATION DETAILS
PROJECT : PROPOSED CONSTRUCTION OF BRANCH BUILDING AT AKUTHOTAPALLY, AMAMNGAL, TELANGANA OF ANDHRA PRADESH GRAMEENA VIKAS BANK
OWNER : ANDHRA PRADESH GRAMEENA VIKAS BANK HEAD OFFICE, WARANGAL
GENERAL NOTES:
1. All dimensions are in milli meters.
ABHI/APGVB/AKU/STR/01
SHEET NO: 01
ZAKI & ASSOCIATES


C1 - (230x450)
M-25 Fe-500
4Nos-16Tor
2Nos-12Tor
8Tor@200 c/c
450
230
8Tor@200 c/c
PEDESTAL
(300x450) M-25
FFL
14Nos-10Tor
Depth up to hard soil
C.C.BED 1:4:8
14Nos-10Tor
14Nos-10Tor
14Nos-10Tor
1800
C2 - (230x450)
M-25 Fe-500
8Nos-16Tor
8Tor@200 c/c
450
230
8Tor@200 c/c
PEDESTAL
(300x450) M-25
FFL
16Nos-10Tor
Depth up to hard soil
C.C.BED 1:4:8
16Nos-10Tor
16Nos-10Tor
16Nos-10Tor
2100
C3 - (230x600)
M-25 Fe-500
4Nos-25Tor
6Nos-20Tor
8Tor@200 c/c
2-SET
600
230
8Tor@200 c/c
PEDESTAL
(380x600) M-25
FFL
16Nos-12Tor
Depth up to hard soil
C.C.BED 1:4:8
16Nos-12Tor
16Nos-12Tor
16Nos-12Tor
2250
C4 - (230x600)
M-25 Fe-500
6Nos-25Tor
4Nos-20Tor
8Tor@200 c/c
2-SET
600
230
8Tor@200 c/c
PEDESTAL
(380x600) M-25
FFL
18Nos-12Tor
Depth up to hard soil
C.C.BED 1:4:8
18Nos-12Tor
18Nos-12Tor
18Nos-12Tor
2400
PROJECT : APGVB @ AKUTHOTAPALLY BANCH
CLIENT : MS.APGVB
TITLE : FOUNDATION DETAILS
NOTES :
1. STRUCTURE IS DESIGNED FOR G+2 FLOORS ONLY.
2. S.B.C. OF SOIL IS CONSIDERED AS 22T/ sqm. (Subject to change or as per site conditions)
3. COVERING FOR MAIN STEEL SHALL BE 40mm FOR COLUMNS & 50mm FOR FOOTINGS.
4. CURING SHALL BE DONE FOR 21 DAYS.
5. STRUCTURE IS DESIGNED FOR SIESMICFORCES AS PER I. S. 1893 ZOON II CONDITIONS.
6. CRANKING OF BARS SHOULD BE DONE @ 1/4 TH OF THE SPAN @ AN ANGLE OF 45°.
R.NO DATE REVISIONS
DATE 12-06-2024
DRAWN SWATHI
CHECKED ZAKI AHMED
ZAKI & ASSOCIATES
4TH FLOOR ANSUYA COMPLEX, LIBERTY X-ROAD, HYDERABAD
PHONE: 23224772, 66613497
FAX: 040 - 23224773
E-mail: zakiassociates@gmail.com
ZAKI AHMED
CONSULTING ENGINEER
DWG.NO. Z/ST/13/02
OWNER :
APGVB
we are with you!
ANDHRA PRADESH GRAMEENA VIKAS BANK
HEAD OFFICE, WARANGAL
PROJECT :
PROPOSED CONSTRUCTION OF BRANCH BUILDING AT AKUTHOTAPALLY, AMAMNGAL, TELANGANA OF ANDHRA PRADESH GRAMEENA VIKAS BANK
TITLE :
FOUNDATION DETAILS
GENERAL NOTES:
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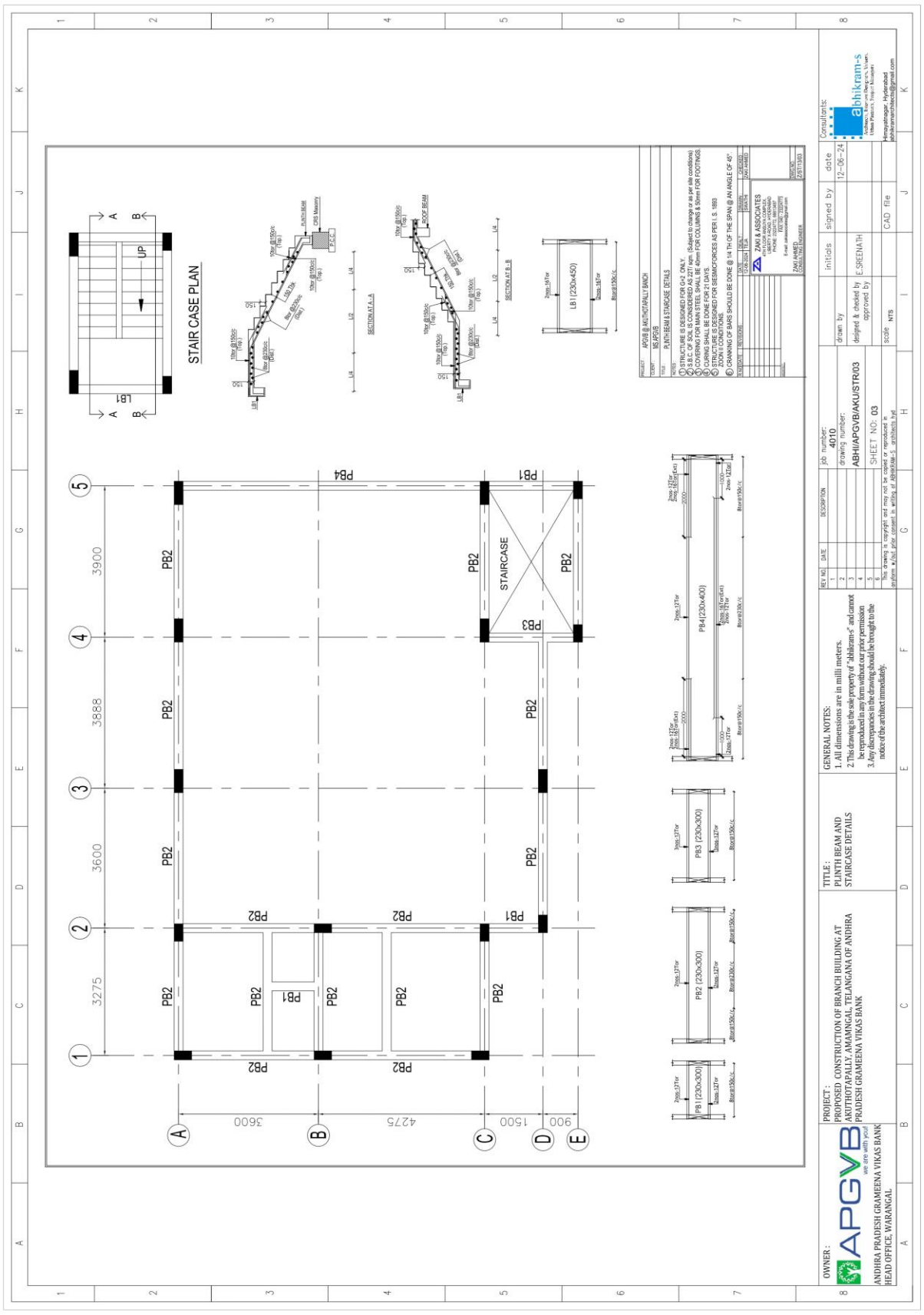
REV NO. DATE DESCRIPTION
job number: 4010
drawing number: ABHI/APGVB/AKU/STR/02
SHEET NO: 02
This drawing is copyright and may not be copied or reproduced in anyform w/out prior consent in writing of ABHIKRAM-S architects hyd
initials signed by date
drawn by
designed & checked by E.SREENATH
approved by
12-06-24
scale NTS
CAD file
Consultants:
abhikram-s
Architects, Interior Designers, Valuers, Urban Planners, Project Managers
Himayatnagar, Hyderabad
abhikramarchitects@gmail.com


STAIR CASE PLAN
STAIRCASE
PB1 (230x300)
PB2 (230x300)
PB3 (230x300)
PB4 (230x400)
LB1 (230x450)
SECTION AT A-A
SECTION AT B-B
PROJECT : PROPOSED CONSTRUCTION OF BRANCH BUILDING AT AKUTHOTAPALLY, AMAMNGAL, TELANGANA OF ANDHRA PRADESH GRAMEENA VIKAS BANK
TITLE : PLINTH BEAM AND STAIRCASE DETAILS
OWNER : ANDHRA PRADESH GRAMEENA VIKAS BANK HEAD OFFICE, WARANGAL
GENERAL NOTES:
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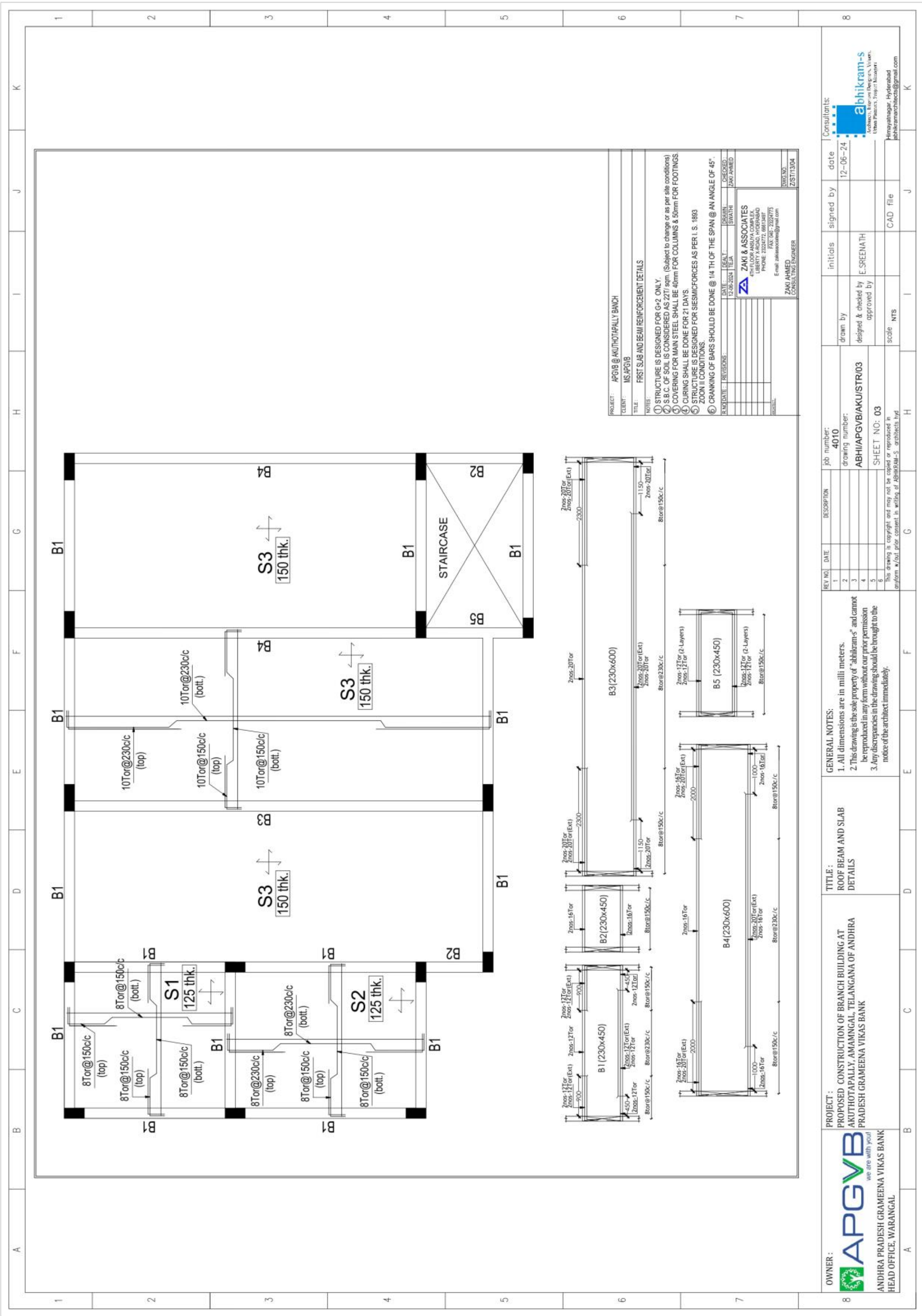
drawing number: ABH/APGVB/AKU/STR/03
SHEET NO: 03
job number: 4010
drawn by
designed & checked by E.SREENATH
approved by
scale NTS
CAD file
signed by
date 12-06-24
Consultants:
abhikram-s
ZAKI & ASSOCIATES


OWNER :
ANDHRA PRADESH GRAMEENA VIKAS BANK
HEAD OFFICE, WARANGAL
PROJECT :
PROPOSED CONSTRUCTION OF BRANCH BUILDING AT AKUTHOTAPALLY, AMAMNGAL, TELANGANA OF ANDHRA PRADESH GRAMEENA VIKAS BANK
TITLE :
ROOF BEAM AND SLAB DETAILS
GENERAL NOTES:
1. All dimensions are in milli meters.
job number: 4010
drawing number: ABHI/APGVB/AKU/STR/03
SHEET NO: 03
S1 125 thk.
S2 125 thk.
S3 150 thk.
STAIRCASE
B1(230x450)
B2(230x450)
B3(230x600)
B4(230x600)
B5 (230x450)