

**BIDDING DOCUMENTS**

**CONSTRUCTION OF SOFTWARE ENGINEERING DEPARTMENT  
(CIVIL & PLUMBING WORKS)**

**At**

**(Quaid-e-Awam University of Engineering Science & Technology)**

**SINGLE STAGE TWO ENVELOPE**



**Available on**

**QUEST website ([www.quest.edu.pk](http://www.quest.edu.pk))**

**&**

**SPPRA website ([www.sppra.org.pk](http://www.sppra.org.pk))**

**Quaid-e-Awam University of Engineering Science & Technology  
Nawabshah, Sindh Pakistan**

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**INVITATION FOR BID**

## INVITATION FOR BID

Date: \_\_\_\_\_  
Bid Reference No.: \_\_\_\_\_

1. The Employer, **Quaid-e-Awam University of Engineering Science & Technology, Nawabshah** invites sealed bids from eligible firms or persons licensed by the Pakistan Engineering Council in the appropriate category and duly qualified with the Employer for the Construction Work of Environmental Engineering Department QUEST, Nawabshah having financial volume as per Tender Cost of Rs. \_\_\_\_\_ which will be completed within 18 Months.

2. A complete set of Bidding Documents may be purchased by an interested eligible bidder on submission of a written application to the office given below and upon payment of a non-refundable fee of Rupees Rs. \_\_\_\_\_ (an amount of ..... ). Bidders may acquire the Bidding Documents from the Office of the Project Coordinator, QUEST, Nawabshah, at 12:00 Noon from Dated: \_\_\_\_\_.

3. All bids must be accompanied by a 2% Bid Security/Earnest Money in the name of Project Coordinator, QUEST, Nawabshah an amount of Rs. \_\_\_\_\_ (Rupees \_\_\_\_\_) and must be delivered to Project Coordinator, QUEST, Nawabshah at or before \_\_\_\_\_ hours, on..... Bids will be opened at the office of Project Coordinator, QUEST, Nawabshah \_\_\_\_\_ on the same day in the presence of TOC (Tender Opening Committee), at the same address reflected above. In case of re-tendering the date will be extended to office hours \_\_\_\_\_ and the opening will be on same date having office hours \_\_\_\_\_.

Project Coordinator

**INSTRUCTIONS TO BIDDERS**

**&**

**BIDDING DATA**

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## **INSTRUCTIONS TO BIDDERS**

### **A. GENERAL**

#### **IB.1 Scope of Bid & Source of Funds**

##### **1.1 Scope of Bid**

The Employer as defined in the Bidding Data (hereinafter called “the Employer”) wishes to receive Bids for the Works summarized in the Bidding Data (hereinafter referred to as “the Works”).

Bidders must quote for the complete scope of work. Any Bid covering partial scope of work will be rejected as non-responsive.

##### **1.2 Source of Funds**

The Employer has arranged funds from HEC-Islamabad, Government of Pakistan.

#### **IB.2 Eligible Bidders**

2.1 Bidding is open to all firms and persons meeting the following requirements:

- a) Duly licensed by the Pakistan Engineering Council (PEC) in the appropriate category for value of Works.
- b) Eligibility: All the interested Contractors / Firms eligibility criteria, viz. having valid registration with Federal Board of Revenue (FBR) for Income Tax, Registration with SRB for SRB Tax & Pakistan Engineering Council (PEC) in relevant category and discipline, Electrical Inspector license of concerned region is mandatory in work Sr. No.3 &4
  - i. Minimum 10 years experience along with documentary evidence of works executed / works in progress.
  - ii. Details of turnover (including in terms of rupees) at least last five years that average turnover should not be less than the twice of estimated cost of above mentioned bids (Sr. No. 01 to 04 each work separately) and it would be verified by bank certificate with statement.
  - iii. Undertaking of affidavit that the firm is not involved in any litigation of abandoned or executing agency.
  - iv. Latest Income Tax Certificate (NTN).
  - v. Detailed portfolio of company profile.

**Method of Procurement: SINGLE STAGE – TWO ENVELOPE**



### **IB.3 Cost of Bidding**

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

## **B. BIDDING DOCUMENTS**

### **IB.4 Contents of Bidding Documents**

- 4.1 In addition to Invitation for Bids, the Bidding Documents are those stated below, and should be read in conjunction with any Addendum issued in accordance with Sub-Clause IB.6.1.

1. Instructions to Bidders & Bidding Data
2. Form of Bid & Schedules to Bid  
Schedules to Bid comprise the following:
  - (i) Schedule A: Schedule of Prices
  - (ii) Schedule B: Specific Works Data
  - (iii) Schedule C: Works to be Performed by Subcontractors
  - (iv) Schedule D: Proposed Programme of Works
  - (v) Schedule E: Method of Performing Works
  - (vi) Schedule F: Integrity Pact
3. Conditions of Contract & Contract Data
4. Standard Forms:
  - (i) Form of Bid Security
  - (ii) Form of Performance Security
  - (iii) Form of Contract Agreement
  - (iv) Form of Bank Guarantee for Advance Payment
5. Specifications
6. Drawings, if any

### **IB.5 Clarification of Bidding Documents**

- 5.1 A prospective bidder requiring any clarification(s) in respect of the Bidding Documents may notify the Engineer/Employer at the Employer's/Engineer's address indicated in the Bidding Data.
- 5.2 The **Engineer/Employer will respond to any request for clarification which it receives earlier than ten (10) days prior to the deadline for the submission of Bids, at least five (5) days prior to dead line for submission of Bids**, who have received the Bidding Documents including a description of the enquiry but without identifying its

source.

#### **IB.6 Amendment of Bidding Documents**

- 6.1 At any time prior to the deadline for submission of Bids, the Employer may, for any reason, whether at his own initiative or in response to a clarification requested by a prospective bidder, modify the Bidding Documents by issuing addendum.
- 6.2 Any addendum thus issued shall be part of the Bidding Documents pursuant to Sub-Clause 6.1 hereof, and shall be communicated in writing to all purchasers of the Bidding Documents. Prospective bidders shall acknowledge receipt of each addendum in writing to the Employer.
- 6.3 To afford prospective bidders reasonable time in which to take an addendum into account in preparing their Bids, the Employer may at its discretion extend the deadline for submission of Bids.

### **C. PREPARATION OF BIDS**

#### **IB.7 Language of Bid**

- 7.1 The bid prepared by the bidder and all correspondence and documents relating to the Bid, exchanged by the bidder and the Employer shall be written in the English language, provided that any printed literature furnished by the bidder may be written in another language so long as accompanied by an English translation of its pertinent passages in which case, for purposes of interpretation of the Bid, the English translation shall govern.

#### **IB.8 Documents Comprising the Bid**

- 8.1 The bid prepared by the bidder shall comprise the following components:
  - (a) Covering Letter
  - (b) Form of Bid duly filled, signed and sealed, in accordance with Sub-Clause IB.14.3.
  - (c) Schedules (A to F) to Bid duly filled and initialed, in accordance with the instructions contained therein & in accordance with Sub-Clause IB14.3.
  - (d) Bid Security furnished in accordance with Clause IB.13.
  - (e) Power of Attorney in accordance with Sub-Clause IB 14.5.
  - (f) Documentary evidence in accordance with Clause IB.11

(g) Documentary evidence in accordance with Clause IB.12.

**IB.9 Sufficiency of Bid**

9.1 Each bidder shall satisfy himself before Bidding as to the correctness and sufficiency of his Bid and of the rates and prices entered in the Schedule of Prices, which rates and prices shall except in so far as it is otherwise expressly provided in the Contract, cover all his obligations under the Contract and all matters and things necessary for the proper completion of the Works.

- 9.2 The bidder is advised to obtain for himself at his own cost and responsibility all information that may be necessary for preparing the bid and entering into a Contract for execution of the Works.

#### **IB.10 Bid Prices, Currency of Bid and Payment**

- 10.1 The bidder shall fill up the Schedule of Prices (Schedule A to Bid) indicating the unit rates and prices of the Works to be performed under the Contract. Prices in the Schedule of Prices shall be entered keeping in view the instructions contained in the Preamble to Schedule of Prices.
- 10.2 Unless otherwise stipulated in the Conditions of Contract, prices quoted by the bidder shall remain fixed during the bidder's performance of the Contract and not subject to variation on any account.
- 10.3 The unit rates and prices in the Schedule of Prices shall be quoted by the bidder in the currency as stipulated in Bidding Data.

#### **IB.11 Documents Establishing Bidder's Eligibility and Qualifications**

- 11.1 Pursuant to Clause IB.8, the bidder shall furnish, as part of its bid, documents establishing the bidder's eligibility to bid and its qualifications to perform the Contract if its bid is accepted.
- 11.2 Bidder/Manufacturer must possess and provide evidence of its capability and the experience as stipulated in Bidding Data and the Qualification Criteria stipulated in the Bidding Documents.

#### **IB.12 Documents Establishing Works' Conformity to Bidding Documents**

- 12.1 The documentary evidence of the Works' conformity to the Bidding Documents may be in the form of literature, drawings and data and the bidder shall furnish documentation as set out in Bidding Data.
- 12.2 The bidder shall note that standards for workmanship, material and equipment, and references to brand names or catalogue numbers, if any, designated by the Employer in the Technical Provisions are intended to be descriptive only and not restrictive.

#### **IB.13 Bid Security**

- 13.1 Each bidder shall furnish, as part of his bid, at the option of the bidder, a Bid Security in the amount stipulated in Bidding Data in Pak. Rupees in the form of Deposit at Call or a Bank Guarantee issued by a Scheduled Bank in Pakistan in favor of the Employer valid for a period up to twenty eight (28) days beyond the bid validity date.
- 13.2 Any bid not accompanied by an acceptable Bid Security shall be rejected by the Employer as non-responsive.

- 13.3 The bid securities of unsuccessful bidders will be returned upon award of contract to the successful bidder or on the expiry of validity of Bid Security whichever is earlier.
- 13.4 The Bid Security of the successful bidder will be returned when the bidder has furnished the required Performance Security, pursuant to Clause IB.21 and signed the Contract Agreement, pursuant to Sub-Clauses IB.20.2 & 20.3.
- 13.5 **The Bid Security may be forfeited:**
- (a) if a bidder withdraws his bid during the period of bid validity; or
  - (b) if a bidder does not accept the correction of his Bid Price, pursuant to Sub-Clause 16.4 (b) hereof; or
  - (c) in the case of a successful bidder, if he fails to:
    - (i) Furnish the required Performance Security in accordance with Clause IB.21, or
    - (ii) Sign the Contract Agreement, in accordance with Sub-Clauses IB.20.2 & 20.3.

#### **IB.14 Validity of Bids, Format, Signing and Submission of Bid**

- 14.1 Bids shall remain valid for the period stipulated in the Bidding Data after the date of bid opening.
- 14.2 All Schedules to Bid are to be properly completed and signed.
- 14.3 No alteration is to be made in the Form of Bid except in filling up the blanks as directed. If any alteration be made or if these instructions be not fully complied with, the bid may be rejected.
- 14.4 Each bidder shall prepare Original and number of copies specified in the Bidding Data of the documents comprising the bid as described in Clause IB.8 and clearly mark them "ORIGINAL" and "COPY" as appropriate. In the event of discrepancy between them, the original shall prevail.
- 14.5 The original and all copies of the bid shall be typed or written in indelible ink and shall be signed by a person or persons duly authorized to sign (in the case of copies, Photostats are also acceptable). This shall be indicated by submitting a written Power of Attorney authorizing the signatory of the bidder to act for and on behalf of the bidder. All pages of the bid shall be initialed and official seal be affixed by the person or persons signing the bid.
- 14.6 The Bid shall be delivered in person or sent by registered mail at the address to Employer as given in Bidding Data.

## **D. SUBMISSION OF BID**

### **IB.15 Deadline for Submission, Modification & Withdrawal of Bids**

- 15.1 Bids must be received by the Employer at the address/provided in Bidding Data not later than the time and date stipulated therein.
- 15.2 Bids submitted through telegraph, telex, fax or e-mail shall not be considered.
- 15.3 Any bid received by the Employer after the deadline for submission prescribed in Bidding Data will be returned unopened to such bidder.
- 15.4 Any bidder may modify or withdraw his bid after bid submission provided that the modification or written notice of withdrawal is received by the Employer prior to the deadline for submission of bids.
- 15.5 Withdrawal of a bid during the interval between the deadline for submission of bids and the expiration of the period of bid validity specified in the Form of Bid may result in forfeiture of the Bid Security pursuant to Sub-Clause IB.13.5 (a).

## **E. BID OPENING AND EVALUATION**

### **IB.16 Bid Opening, Clarification and Evaluation**

- 16.1 The Employer will open the bids, in the presence of bidders' and TOC (Tender Opening Committee), at the time, date and location stipulated in the Bidding Data.
- 16.2 The bidder's name, Bid Prices, any discount, the presence or absence of Bid Security, and such other details as the Employer at its discretion may consider appropriate, will be announced by the Employer at the bid opening. **The Employer will record the minutes of the bid opening.** Representatives of the bidders who choose to attend shall sign the **attendance sheet.**  
Any Bid Price or discount which is not read out and recorded at bid opening will not be taken into account in the evaluation of bid.
- 16.3 To assist in the examination, evaluation and comparison of Bids the Engineer/Employer may, at its discretion, ask the bidder for a clarification of its Bid. The request for clarification and the response shall be in writing and no change in the price or substance of the Bid shall be sought, offered or permitted.
- 16.4 (a) Prior to the detailed evaluation, pursuant to Sub-Clauses IB.16.7 to 16.9, the Engineer/Employer will determine the substantial responsiveness of each bid to the Bidding Documents. For purpose of these Clauses, a substantially responsive bid is one which conforms to all the terms and conditions of the Bidding Documents without material deviations. It will include determining the requirements listed in **Bidding Data**

(b) **Arithmetical errors will be rectified on the following basis:**

If there is a discrepancy between the unit price and total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail and the total price shall be corrected. If there is a discrepancy between the words and figures the amount in words shall prevail. If there is a discrepancy between the Total Bid price entered in Form of Bid and the total shown in Schedule of Prices-Summary, the amount stated in the Form of Bid will be corrected by the Employer in accordance with the Corrected Schedule of Prices.

**If the bidder does not accept the corrected amount of Bid, his Bid will be rejected and his Bid Security forfeited.**

- 16.5 A Bid determined as substantially non-responsive will be rejected and will not subsequently be made responsive by the bidder by correction of the non-conformity.
- 16.6 Any minor informality or non-conformity or irregularity in a Bid which does not constitute a material deviation may be waived by Employer, provided such waiver does not prejudice or affect the relative ranking of any other bidders.
- 16.7 The Engineer/Employer will evaluate and compare only the bids previously determined to be substantially responsive pursuant to Sub-Clauses IB.16.4 to 16.6 as per requirements given hereunder. Bids will be evaluated for complete scope of works. The prices will be compared on the basis of the Evaluated Bid Price pursuant to Sub-Clause 16.8 herein below.

(a) **Technical Evaluation**

It will be examined in detail whether the Works offered by the bidder complies with the Technical Provisions of the Bidding Documents. For this purpose, the bidder's data submitted with the bid in Schedule B to Bid will be compared with technical features/criteria of the Works detailed in the Technical Provisions. Other technical information submitted with the bid regarding the Scope of Work will also be reviewed.

(b) Commercial Evaluation

It will be examined in detail whether the bids comply with the commercial/contractual conditions of the Bidding Documents. It is expected that **no material deviation/stipulation shall be taken by the bidders.**

16.8 Evaluated Bid Price

In evaluating the bids, the Engineer/Employer will determine for each bid in addition to the Bid Price, the following factors (adjustments) in the manner and to the extent indicated below to determine the Evaluated Bid Price:

- (i) Making any correction for arithmetic errors pursuant to Sub-Clause 16.4 hereof.
- (ii) Making an appropriate price adjustment for any other acceptable variation or deviation.
- (iii) Making an appropriate price adjustment for Deviations in terms of Payments (if any and acceptable to the Employer).
- (iv) Discount, if any, offered by the bidders as also read out and recorded at the time of bid opening.

16.9 Evaluation Methods

Pursuant to Sub-Clause 16.8, Para (ii), and (iii) following evaluation methods for price adjustments will be followed:

(i) Price Adjustment for Technical Compliance

The cost of making good any deficiency resulting from technical non compliance will be added to the Corrected Total Bid Price for comparison purposes only. The adjustments will be applied taking the highest price quoted by other bidders being evaluated in detail in their original Bids for corresponding item. In case of non availability of price from other bidders, the price will be estimated by the Engineer/Employer.

(ii) Price Adjustment for Commercial Compliance

The cost of making good any deficiency resulting from any quantifiable variations and deviations from the Bid Schedules and Conditions of Contract, as determined by the Engineer/Employer will be added to the Corrected Total Bid Price for comparison purpose only. Adjustment for commercial compliance will be added to the Corrected Total Bid Prices.



- (iii) Price Adjustment for Deviation in Terms of Payments

Refer to Bidding Data

#### **IB.17 Process to be Confidential**

- 17.1 Subject to Sub-Clause IB.16.3 heretofore, no bidder shall contact Engineer/Employer on any matter relating to its Bid from the time of the Bid opening to the time the bid evaluation result is announced by the Employer. The evaluation result shall be announced at least ten (10) days prior to award of Contract. The announcement to all bidders will include table(s) comprising read out prices, discounted prices, price adjustments made, final evaluated prices and recommendations against all the bids evaluated.
- 17.2 Any effort by a bidder to influence Engineer/Employer in the Bid evaluation, Bid comparison or Contract Award decisions may result in the rejection of his Bid. Whereas, any bidder feeling aggrieved may lodge a written complaint not later than fifteen (15) days after the announcement of the bid evaluation result, however, mere fact of lodging a complaint shall not warrant suspension of procurement process.

#### **F. AWARD OF CONTRACT**

##### **IB.18. Post Qualification**

- 18.1 The Employer, at any stage of the bid evaluation, having credible reasons for or *prima facie* evidence of any defect in supplier's or contractor's capacities, may require the suppliers or contractors to provide information concerning their professional, technical, financial, legal or managerial competence whether already pre-qualified or not:

Provided that such qualification shall only be laid down after recording reasons therefore in writing. They shall form part of the records of that bid evaluation report.

- 18.2 The determination will take into account the bidder's financial and technical capabilities. It will be based upon an examination of the documentary evidence of the bidders' qualifications submitted under Clause IB.11, as well as such other information required in the Bidding Documents.

##### **IB.19 Award Criteria & Employer's Right**

- 19.1 Subject to Sub-Clause IB.19.2, the Employer will award the Contract to the bidder whose bid has been determined to be substantially responsive to the Bidding Documents and who has offered the lowest evaluated Bid Price, provided that such bidder has been determined to be qualified to satisfactory perform the Contract in accordance with the provisions of Clause IB.18.
- 19.2 Not with standing Sub-Clause IB.19.1, the Employer reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids, at any time prior to award of

Contract, without thereby incurring any liability to the affected bidders or any obligation to inform the affected bidders of the grounds for the Employer's action except that the grounds for its rejection of all bids shall upon request be communicated, to any bidder who submitted a bid, without justification of the grounds. Notice of the rejection of all the bids shall be given promptly to all the bidders.

#### **IB.20 Notification of Award & Signing of Contract Agreement**

- 20.1 Prior to expiration of the period of bid validity prescribed by the Employer, the Employer will notify the successful bidder in writing ("Letter of Acceptance") that his bid has been accepted.
- 20.2 Within seven (07) days from the date of furnishing of acceptable Performance Security under the Conditions of Contract, the Employer will send the successful bidder the Form of Contract Agreement provided in the Bidding Documents, incorporating all agreements between the parties.
- 20.3 The formal Agreement between the Employer and the successful bidder shall be executed within seven (07) days of the receipt of Form of Contract Agreement by the successful bidder from the Employer.

#### **IB.21 Performance Security**

- 21.1 The successful bidder shall furnish to the Employer a Performance Security in the form and the amount stipulated in the Conditions of Contract within a period of fourteen (14) days after the receipt of Letter of Acceptance.
- 21.2 Failure of the successful bidder to comply with the requirements of Sub-Clauses IB.20.2 & 20.3 or 21.1 or Clause IB.22 shall constitute sufficient grounds for the annulment of the award and forfeiture of the Bid Security.

#### **IB.22 Integrity Pact**

The Bidder shall sign and stamp the Form of Integrity Pact provided at Schedule-F to Bid in the Bidding Document for all Federal Government procurement contracts. Failure to provide such Integrity Pact shall make the bid non-responsive.

## BIDDING DATA

### Instructions to Bidders

#### Clause Reference

#### 1.1 Employer

Quaid-e-Awam University of Engineering Science & Technology  
Nawabshah, Sindh.

#### Brief Description of Works

Construction of Software Engineering Department (Civil & Plumbing Works) at QUEST,  
Nawabshah

- 5.1 (a) Employer's address:  
Postal Address: Office of the Project Coordinator/Project Implementation Unit,  
Quaid-e-Awam University of Engineering, Science & Technology (QUEST),  
Nawabshah S.B.A Sindh.  
Phone: 0244 930615  
E-mail: pc.quest92@gmail.com
- (b) Engineer's address:  
Postal Address: Quaid-e-Awam University of Engineering Science &  
Technology, Nawabshah.  
Phone: 0244 930615  
E-mail: pc.quest92@gmail.com
- 10.3 Bid shall be quoted entirely in Pak. Rupees. The payment shall be made in Pak. Rupees.
- 11.2 The bidder/manufacturer has the financial, technical and production capability necessary to perform the Contract as follows: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- 12.1 (a) A detailed description of the Works, essential technical and performance characteristics.
- (b) Complete set of technical information, description data, literature and drawings as required in accordance with Schedule B to Bid, Specific Works Data. This will include but not be limited to a sufficient number of drawings, photographs,

catalogues, illustrations and such other information as is necessary to illustrate clearly the significant characteristics such as general construction dimensions and other relevant information about the works to be performed.

**13.1 Amount of Bid Security**

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(Fill in lump sum amount or in %age of bid amount of 5%)

**14.1 Period of Bid Validity**

Not More than 90 (Ninety Days) can be extended as per ground realities.

**14.4 Number of Copies of the Bid to be submitted**

(02) Copies “One original plus one photocopy” has been submitted.

**14.6 (a) Employer's Address for the Purpose of Bid Submission**

Employer’s address:

Postal Address: Office of the Project Coordinator/Project Implementation Unit,  
Quaid-e-Awan University of Engineering, Science & Technology (QUEST),  
Nawabshah S.B.A Sindh.  
Phone:0244 930615  
E-mail: pc.quest92@gmail.com

**15.1 Deadline for Submission of Bids**

11:00 am on 20<sup>th</sup> December 2022.

**16.1 Venue, Time, and Date of Bid Opening**

Venue: at The Vice Chancellor Secretariat, QUEST Nawabshah.  
Time: 11:30 am  
Date: 20<sup>th</sup> December 2022

**16.4 Responsiveness of Bids**

- (i) the Bid is valid till required period,
- (ii) the Bid prices are firm during currency of contract (if it is a fixed price bid)
- (iii) Completion period offered is within specified limits,
- (iv) the Bidder/Manufacturer is eligible to Bid and possesses the requisite experience,

capability and qualification.

- (v) The Bid does not deviate from basic technical requirements and
- (vi) the Bids are generally in order, etc.

#### 16.9 **Price Adjustment:**

- (iii) Price Adjustment for Deviations in Terms of Payment

If a bid deviates from the terms of payment/payment conditions as specified in the Conditions of Contract and if such deviation is considered acceptable to the Employer, mark-up earned for any earlier payments involved in the terms outlined in the Bid as compared to those stipulated in the Conditions of Contract shall be calculated at the mark-up rate per annum (as per current policy) and shall be added to the Corrected Total Bid Price for comparison purposes only.

**FORM OF BID AND SCHEDULES TO BID**

## FORM OF BID

(LETTER OF OFFER)

Bid Reference No. \_\_\_\_\_  
Construction of Software Engineering Department  
at QUEST, Nawabshah.

To:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Gentlemen,

1. Having examined the Bidding Documents including Instructions to Bidders, Bidding Data, Conditions of Contract, Contract Data, Specifications, Drawings, if any, Schedule of Prices and Addenda Nos.  
\_\_\_\_\_ for the execution of the above-named Works, we, the undersigned, being a company doing business under the name of and address \_\_\_\_\_ and being duly incorporated under the laws of Pakistan hereby offer to execute and complete such Works and remedy any defects therein in conformity with the said Documents including Addenda thereto for the Total Bid Price of Rs. \_\_\_\_\_ (Rupees \_\_\_\_\_) or such other sum as may be ascertained in accordance with the said Documents.
2. We understand that all the Schedules attached hereto form part of this Bid.
3. As security for due performance of the undertakings and obligations of this Bid, we submit herewith a Bid Security in the amount of \_\_\_\_\_ drawn in your favour or made payable to you and valid for a period of twenty eight (28) days beyond the period of validity of Bid.
4. We undertake, if our Bid is accepted, to commence the Works and to deliver and complete the Works comprised in the Contract within the time(s) stated in Contract Data.
5. We agree to abide by this Bid for the period of \_\_\_\_\_ days from the date fixed for receiving the same and it shall remain binding upon us and may be accepted at any time before the expiration of that period.
6. Unless and until a formal Agreement is prepared and executed, this Bid, together with your written acceptance thereof, shall constitute a binding contract between us.
7. We undertake, if our Bid is accepted, to execute the Performance Security referred to in Conditions of Contract for the due performance of the Contract.

8. We understand that you are not bound to accept the lowest or any bid you may receive.
9. We do hereby declare that the Bid is made without any collusion, comparison of figures or arrangement with any other person or persons making a bid for the Works.

Dated this \_\_\_\_\_ day of \_\_\_\_\_, 22

Signature \_\_\_\_\_

in the capacity of \_\_\_\_\_ duly authorized to sign bid for and on behalf of

\_\_\_\_\_  
(Name of Bidder in Block Capitals)

(Seal)

Address

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Witness:

(Signature) \_\_\_\_\_

Name: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_



**[SCHEDULES TO BID INCLUDE THE FOLLOWING:**

- Schedule A to Bid: Schedule of Prices
- Schedule B to Bid: Specific Works Data
- Schedule C to Bid: Works to be Performed by Subcontractors
- Schedule D to Bid: Proposed Programme of Works
- Schedule E to Bid: Method of Performing Works
- Schedule F to Bid: Integrity Pact]

**SCHEDULE – A TO BID**

**SCHEDULE OF PRICES**

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	(a) Summary of Bid Prices	
	(b) Detailed Schedule of Prices	

**PREAMBLE TO SCHEDULE OF PRICES**

**1. General**

- 1.1** The Schedule of Prices shall be read in conjunction with the Conditions of Contract, Contract Data together with the Specifications and Drawings, if any.
- 1.2** The Contract shall be for the whole of the Works as described in these Bidding Documents. Bids must be for the complete scope of works.

**2. Description**

- 2.1** The general directions and descriptions of works and materials are not necessarily repeated nor summarized in the Schedule of Prices. References to the relevant sections of the Bidding Documents shall be made before entering prices against each item in the Schedule of Prices.

**3. Units & Abbreviations**

- 3.1** Units of measurement, symbols and abbreviations expressed in the Bidding Documents shall comply with the System International Unites (SI Units).

**4. Rates and Prices**

- 4.1** Except as otherwise expressly provided under the Conditions of Contract, the rates and amounts entered in the Schedule of Prices shall be the rates at which the Contractor shall be paid and shall be the full inclusive value of the works set forth or implied in the Contract; except for the amounts reimbursable, if any to the Contractor under the Contract.
- 4.2** Unless otherwise stipulated in the Contract Data, the rates and prices entered by the bidder shall not be subject to adjustment during the performance of the Contract.
- 4.3** All duties, taxes and other levies payable by the Contractor shall be included in the rates and prices.
- 4.4** The whole cost of complying with the provisions of the Contract shall be included in the items provided in the Schedule of Prices, and where no items are provided, the cost shall be deemed to be distributed among the rates and prices entered for the related items of the Works and no separate payment will be made for those items.

The rates, prices and amounts shall be entered against each item in the

## **SCHEDULE - A TO BID**

Schedule of Prices. Any item against which no rate or price is entered by the bidder will not be paid for by the Employer when executed and shall be deemed covered by the rates and prices for other items in the Schedule of Prices.

- 4.5** (a) The bidder shall be deemed to have obtained all information as to and all requirements related thereto which may affect the bid price.
- (b) The Contractor shall be responsible to make complete arrangements for the transportation of the Plants, Technical staff and relevant drawings and documents shall be available at the Site.
- 4.6** The Contractor shall provide for all parts of the Works to be completed in every respect. Notwithstanding that any details, accessories, etc. required for the complete installation and satisfactory operation of the Works, are not specifically mentioned in the Specifications, such details shall be considered as included in the Contract Price.

### **5. Bid Prices**

#### **5.1 Break-up of Bid Prices**

The various elements of Bid Prices shall be quoted as detailed by the Employer in the format of Schedule of Prices.

The bidder shall recognize such elements of the costs which he expects to incur the performance of the Works and shall include all such costs in the rates and amounts entered in the Schedule of Prices.

#### **5.2 Total Bid Price**

The total of bid prices in the Schedule of Prices shall be entered in the Summary of Bid Prices.

### **6. Provisional Sums**

- 6.1** Provisional Sums included and so designated in the Schedule of Prices if any, shall be expended in whole or in part at the direction and discretion of the Engineer/Employer. The Contractor will only receive payment in respect of Provisional Sums if he has been instructed by the Engineer/Employer to utilize such sums.

**SCHEDULE - A TO BID**

**SCHEDULE OF PRICES – SUMMARY OF BOQ/BID PRICES**

<b>Bill No.</b>	<b>Description</b>	<b>Total Amount (Rs)</b>
1.		
	Total Bid Price:	

**SCHEDULE - A TO BID**

**SCHEDULE OF PRICES/BOQ**

<b>Item No.</b>	<b>Description</b>	<b>Quantity</b>	<b>Unit Rate(Rs)</b>	<b>Total Amount (Rs)</b>
1.				
<b>Total:</b>				

**SCHEDULE - B TO BID**

**\*SPECIFIC WORKS DATA/ SCOPE OF WORK**

(To be prepared and incorporated by the Employer)

**Following Date has been provided by the Contractor**

**Name of Site Engineer:**  
**PEC License No.**  
**Contact No.**

**Name of Material Engineer:**  
**PEC License No.**  
**Contact No.**

**Name of Surveyor:**  
**(At least diploma holder)**  
**Contact No.**

Contractor seal



**SCHEDULE – C TO BID**

**WORKS TO BE PERFORMED BY SUBCONTRACTORS**

The bidder will do the work with his own forces except the work listed below which he intends to sub-contract. (Attach the Agreement copy)

Items of Works to be Sub-Contracted	Name and address of Sub-Contractors	Statement of similar works previously executed (attach evidence)
--	--	---

1.  
Company Name:  
Nature of Work award:  
Time of Completion  
Contact Person:

2.  
Company Name:  
Nature of Work award:  
Time of Completion  
Contact Person:

3.  
Company Name:  
Nature of Work award:  
Time of Completion  
Contact Person:

Contractor Seal

**Note:**

1. No change of Sub-Contractors shall be made by the bidder without prior approval of the Employer.
2. The truthfulness and accuracy of the statement as to the experience of Sub-Contractors is guaranteed by the bidder. The Employer's judgment shall be final as to the evaluation of the experience of Sub-Contractors submitted by the bidder.
3. Statement of similar works shall include description, location & value of works, year completed and name & address of the clients.

## **SCHEDULE – D TO BID**

### **PROPOSED PROGRAMME OF WORKS**

Bidder shall provide a programme in a bar-chart showing the sequence of work items by which he proposes to complete the Works of the entire Contract. The programme should indicate the sequence of work items and the period of time during which he proposes to complete the Works including the activities like designing, schedule of submittal of drawings, ordering and procurement of materials, manufacturing, delivering, construction of civil works, erection, testing and commissioning of Works to be supplied under the Contract. The soft and hard copy of Program of work (i-e) Primavera or MS Project shall be provided before execution of the work.

## **SCHEDULE – E TO BID**

### **METHOD OF PERFORMING WORKS**

As per the requirement of Engineer the bidder is required to submit a narrative outlining the method of performing the Works. The narrative should indicate in detail and include but not be limited to:

- The sequence and methods in which he proposes to carry out the Works, including the number of shifts per day and hours per shift, he expects to work.
- A list of all major items of constructional and erectional plant, tools and vehicles proposed to be used in delivering/carrying out the Works at Site
- The procedure for installation of equipment and transportation of equipment and materials to the site.
- Organization chart indicating head office & field office personnel involved in management, supervision and engineering of the Works to be done under the Contract. (This is necessary to submit before execution of the work)

**SCHEDULE – F TO BID**

**(INTEGRITY PACT)**

Contract No. \_\_\_\_\_ Dated \_\_\_\_\_

Contract Value: \_\_\_\_\_

Contract Title: \_\_\_\_\_

M/s ----- hereby declares that it has not obtained or induced the procurement of any contract, right, interest, privilege or other obligation or benefit from Government of Pakistan (GoP) or any administrative subdivision or agency thereof or any other entity owned or controlled by GoP through any corrupt business practice.

Without limiting the generality of the foregoing, M/S----- represents and warrants that it has fully declared the brokerage, commission, fees etc. paid or payable to anyone and not given or agreed to give and shall not give or agree to give to anyone within or outside Pakistan either directly or indirectly through any natural or juridical person, including its affiliate, agent, associate, broker, consultant, director, promoter, shareholder, sponsor or subsidiary, any commission, gratification, bribe, finder's fee or kickback, whether described as consultation fee or otherwise, with the object of obtaining or inducing the procurement of a contract, right, interest, privilege or other obligation or benefit in whatsoever form from GoP, except that which has been expressly declared pursuant hereto.

M/S----- certifies that it has made and will make full disclosure of all agreements and arrangements with all persons in respect of or related to the transaction with GoP and has not taken any action or will not take any action to circumvent the above declaration, representation or warranty.

M/S----- accepts full responsibility and strict liability for making any false declaration, not making full disclosure, misrepresenting facts or taking any action likely to defeat the purpose of this declaration, representation and warranty. It agrees that any contract, right, interest, privilege or other obligation or benefit obtained or procured as aforesaid shall, without prejudice to any other rights and remedies available to GoP under any law, contract or other instrument, be voidable at the option of GoP.

Notwithstanding any rights and remedies exercised by GoP in this regard, [name of Supplier] agrees to indemnify GoP for any loss or damage incurred by it on account of its corrupt business practices and further pay compensation to GoP in an amount equivalent to ten times the sum of any commission, gratification, bribe, finder's fee or kickback given by [name of Supplier] as aforesaid for the purpose of obtaining or inducing the procurement of any contract, right, interest, privilege or other obligation or benefit in whatsoever form from GoP.

Name of Employer: .....

Signature: .....

[Seal]

Name of Contractor: .....

Signature: .....

[Seal]

## **CONDITIONS OF CONTRACT**

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### CONDITIONS OF CONTRACT

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## **CONDITIONS OF CONTRACT**

### **1. GENERAL PROVISIONS**

#### **1.1 Definitions**

In the Contract as defined below, the words and expressions defined shall have the following meanings assigned to them, except where the context requires otherwise:

##### **The Contract**

- 1.1.1 “Contract” means the Contract Agreement and the other documents listed in the Contract Data.
- 1.1.2 “Specifications” means the document as listed in the Contract Data, including Employer’s requirements in respect of design to be carried out by the Contractor (if any), and any Variation to such document.
- 1.1.3 “Drawings” means the Employer’s drawings of the Works as listed in the Contract Data, and any Variation to such drawings.

##### **Persons**

- 1.1.4 “Employer” means the person named in the Contract Data and the legal successors in title to this person, but not (except with the consent of the Contractor) any assignee.
- 1.1.5 “Contractor” means the person named in the Contract Data and the legal successors in title to this person, but not (except with the consent of the Employer) any assignee.
- 1.1.6 “Party” means either the Employer or the Contractor.

##### **Dates, Times and Periods**

- 1.1.7 “Commencement Date” means the date fourteen (14) days after the date the Contract comes into effect or any other date named in the Contract Data.
- 1.1.8 “Day” means a calendar day
- 1.1.9 “Time for Completion” means the time for completing the Works as stated in the Contract Data (or as extended under Sub-Clause 7.3), calculated from the Commencement Date.

##### **Money and Payments**

- 1.1.10 “Cost” means all expenditure properly incurred (or to be incurred) by the Contractor, whether on or off the Site, including overheads and similar charges but does not include any allowance for profit.



## **Other Definitions**

- 1.1.11 “Contractor’s Equipment” means all machinery, apparatus and other things required for the execution of the Works but does not include Materials or Plant intended to form part of the Works.
- 1.1.12 “Country” means the Islamic Republic of Pakistan.
- 1.1.13 “Employer’s Risks” means those matters listed in Sub-Clause 6.1.
- 1.1.14 “Force Majeure” means an event or circumstance which makes performance of a Party’s obligations illegal or impracticable and which is beyond that Party’s reasonable control.
- 1.1.15 “Materials” means things of all kinds (other than Plant) to be supplied and incorporated in the Works by the Contractor.
- 1.1.16 “Plant” means the machinery and apparatus intended to form or forming part of the Works.
- 1.1.17 “Site” means the places provided by the Employer where the Works are to be executed, and any other places specified in the Contract as forming part of the Site.
- 1.1.18 “Variation” means a change which is instructed by the Engineer/Employer under Sub-Clause 10.1.
- 1.1.19 “Works” means any or all the works whether Supply, Installation, Construction etc. and design (if any) to be performed by the Contractor including temporary works and any variation thereof.
- 1.1.20 “Engineer” means the person notified by the Employer to act as Engineer for the purpose of the Contract and named as such in Contract Data.

## **1.2 Interpretation**

Words importing persons or parties shall include firms and organizations. Words importing singular or one gender shall include plural or the other gender where the context requires.

## **1.3 Priority of Documents**

The documents forming the Contract are to be taken as mutually explanatory of one another. If an ambiguity or discrepancy is found in the documents, the priority of the documents shall be in accordance with the order as listed in the Contract Data.

## **1.4 Law**

The law of the Contract is the relevant Law of Islamic Republic of Pakistan.

## **1.5 Communications**

All Communications related to the Contract shall be in English language.

## **1.6 Statutory Obligations**

The Contractor shall comply with the Laws of Islamic Republic of Pakistan and shall give all notices and pay all fees and other charges in respect of the Works.

## **2. THE EMPLOYER**

### **2.1 Provision of Site**

The Employer shall provide the Site and right of access thereto at the times stated in the Contract Data.

### **2.2 Permits etc.**

The Employer shall, if requested by the Contractor, assist him in applying for permits, licenses or approvals which are required for the Works.

### **2.3 Engineer's/Employer's Instructions**

The Contractor shall comply with all instructions given by the Employer or the Engineer, if notified by the Employer, in respect of the Works including the suspension of all or part of the Works.

### **2.4 Approvals**

No approval or consent or absence of comment by the Engineer/Employer shall affect the Contractor's obligations.

## **3. ENGINEER'S/EMPLOYER'S REPRESENTATIVES**

### **3.1 Authorized Person**

The Employer shall appoint a duly authorized person to act for him and on his behalf for the purposes of this Contract. Such authorized person shall be duly identified in the Contract Data or otherwise notified in writing to the Contractor as soon as he is so appointed. In either case the Employer shall notify the Contractor, in writing, the precise scope of the authority of such authorized person at the time of his appointment.

### **3.2 Engineer's/Employer's Representative**

The name and address of Engineer's/Employer's Representative is given in Contract Data. However the Contractor shall be notified by the

Engineer/Employer, the delegated duties and authority before the Commencement of Works.

#### **4. THE CONTRACTOR**

##### **4.1 General Obligations**

The Contractor shall carry out the Works properly and in accordance with the Contract. The Contractor shall provide all supervision, labor, Materials, Plant and Contractor's Equipment which may be required.

##### **4.2 Contractor's Representative**

The Contractor shall appoint a representative (Site Engineer with valid PEC License) at site on full time basis to supervise the execution of work and to receive instructions on behalf of the Contractor but only after obtaining the consent of the Employer for such appointment which consent shall not be unreasonable withheld by the Employer. Such authorized representative may be **substituted/replaced by the Contractor at any time during the Contract Period but only after obtaining the consent of the Employer as aforesaid.**

##### **4.3 Subcontracting**

The Contractor shall not subcontract the whole of the Works. **The Contractor shall not subcontract any part of the Works without the consent of the Employer.**

##### **4.4 Performance Security**

The Contractor shall furnish to the Employer within fourteen (14) days after receipt of Letter of Acceptance a Performance Security at the option of the bidder, in the form of Bank Draft or Bank for the amount and validity specified in Contract Data.

#### **5. DESIGN BY CONTRACTOR**

##### **5.1 Contractor's Design**

The Contractor shall carry out design to the extent specified, as referred to in the Contract Data. The Contractor shall promptly submit to the Engineer/Employer all designs prepared by him. Within fourteen (14) days of receipt the Engineer/Employer shall notify any comments or, if the design submitted is not in accordance with the Contract, shall reject it stating the reasons. The Contractor shall not construct any element of the Works designed by him within fourteen (14) days after the design has been submitted to the Engineer/Employer or which has been rejected. Design that has been rejected shall be promptly amended and resubmitted. The Contractor shall resubmit all designs commented on taking these comments into account as necessary. (5.1 clause Deleted and replaced, that as per demand of the Engineer contractor shall submit the design)

## **5.2 Responsibility for Design**

The Contractor shall remain responsible for his bided design and the design under this Clause, both of which shall be fit for the intended purposes defined in the Contract and he shall also remain responsible for any infringement of any patent or copyright in respect of the same. The Engineer/Employer shall be responsible for the Specifications and Drawings.(5.2 clause Deleted and replaced, that as per demand of the Engineer contractor shall submit the design)

## **6. EMPLOYER'S RISKS**

### **6.1 The Employer's Risks**

The Employer's Risks are:-

- a) war, hostilities (whether war be declared or not), invasion, act of foreign enemies, within the Country;
- b) Rebellion, terrorism, revolution, insurrection, military or usurped power, or civil war, within the Country;
- c) Riot, commotion or disorder by persons other than the Contractor's personnel and other employees including the personnel and employees of Sub-Contractors, affecting the Site and/or the Works;
- d) ionizing radiations, or contamination by radio-activity from any nuclear fuel, or from any nuclear waste from the combustion of nuclear fuel, radio-active toxic explosive, or other hazardous properties of any explosive nuclear assembly or nuclear component of such an assembly, except to the extent to which the Contractor/Sub-Contractors may be responsible for the use of any radio-active material;
- e) Pressure waves caused by aircraft or other aerial devices travelling at sonic or supersonic speeds;
- f) Use or occupation by the Employer of any part of the Works, except as may be specified in the Contract;
- g) late handing over of sites, anomalies in drawings, late delivery of designs and drawings of any part of the Works by the Employer's personnel or by others for whom the Employer is responsible;
- h) a suspension under Sub-Clause 2.3 unless it is attributable to the Contractor's failure; and
- i) physical obstructions or physical conditions other than climatic conditions, encountered on the Site during the performance of the Works, for which the Contractor immediately notified to the Employer and accepted by the Employer.

## **7. TIME FOR COMPLETION**

### **7.1 Execution of the Works**

The Contractor shall commence the Works on the Commencement Date and shall proceed expeditiously and without delay and shall complete the Works, subject to Sub-Clause 7.3 below, within the Time for Completion.

### **7.2 Programme**

Within the time stated in the Contract Data, the Contractor shall submit to the Engineer/Employer a programme for the Works in the form stated in the Contract Data.

### **7.3 Extension of Time**

The Contractor shall, within such time as may be reasonable under the circumstances, notify the Employer/Engineer of any event(s) falling within the scope of Sub-Clause 6.1 or 10.3 of these Conditions of Contract and request the Employer/Engineer for a reasonable extension in the time for the completion of Works. Subject to the aforesaid, the Employer/Engineer shall determine such reasonable extension in the time for the completion of Works as may be justified in the light of the details/particulars supplied by the Contractor in connection with the such determination by the Employer/Engineer within such period as may be prescribed by the Employer/Engineer for the same; and the Employer shall extend the Time for Completion as determined.

### **7.4 Late Completion**

If the Contractor fails to complete the Works within the Time for Completion, the Contractor's only liability to the Employer for such failure shall be to pay the amount stated in the Contract Data for each day for which he fails to complete the Works.

## **8. TAKING-OVER**

### **8.1 Completion**

The Contractor may notify the Engineer/Employer when he considers that the Works are complete.

### **8.2 Taking-Over Notice**

Within fourteen (14) days of the receipt of the said notice of completion from the Contractor the Employer/Engineer shall either takeover the completed Works and issue a Certificate of Completion to that effect or shall notify the Contractor his reasons for not taking-over the Works. While issuing the Certificate of Completion as aforesaid, the Employer/Engineer may identify any outstanding

items of work which the Contractor shall undertake during the Maintenance Period.

## **9. REMEDYING DEFECTS**

### **9.1 Remediating Defects**

The Contractor shall for a period stated in the Contract Data from the date of issue of the Certificate of Completion carry out, at no cost to the Employer, repair and rectification work which is necessitated by the earlier execution of poor quality of work or use of below specifications material in the execution of Works and which is so identified by the Employer/Engineer in writing within the said period. Upon expiry of the said period, and subject to the Contractor's faithfully performing his aforesaid obligations, the Employer/Engineer shall issue a Maintenance Certificate whereupon all obligations of the Contractor under this Contract shall come to an end.

Failure to remedy any such defects or complete outstanding work within a reasonable time shall entitle the Employer to carry out all necessary works at the Contractor's cost. However, the cost of remedying defects not attributable to the Contractor shall be valued as a Variation.

### **9.2 Uncovering and Testing**

The Engineer/Employer may give instruction as to the uncovering and/or testing of any work. Unless as a result of an uncovering and/or testing it is established that the Contractor's design, Materials, Plant or workmanship are not in accordance with the Contract, the Contractor shall be paid for such uncovering and/or testing as a Variation in accordance with Sub-Clause 10.2.

## **10. VARIATIONS AND CLAIMS**

### **10.1 Right to Vary**

The Employer/Engineer may issue Variation Order(s) in writing. Where for any reason it has not been possible for the Employer/Engineer to issue such Variations Order(s), the Contractor may confirm any verbal orders given by the Employer/Engineer in writing and if the same are not refuted/denied by the Employer/Engineer within seven (7) days of the receipt of such confirmation the same shall be deemed to be a Variation Orders for the purposes of this Sub-Clause.

### **10.2 Valuation of Variations**

Variations shall be valued as follows:

- a) at a lump sum price agreed between the Parties, or
- b) where appropriate, at rates in the Contract, or

- c) in the absence of appropriate rates, the rates in the Contract shall be used as the basis for valuation, or failing which
- d) at appropriate new rates, as may be agreed or which the Engineer/Employer considers appropriate, or
- e) if the Engineer/Employer so instructs, at day work rates set out in the Contract Data for which the Contractor shall keep records of hours of labor and Contractor's Equipment, and of Materials, used.

### **10.3 Early Warning**

The Contractor shall notify the Engineer/Employer in writing as soon as he is aware of any circumstance which may delay or disrupt the Works, or which may give rise to a claim for additional payment.

To the extent of the Contractor's failure to notify, which results to the Engineer/Employer being unable to keep all relevant records or not taking steps to minimize any delay, disruption, or Cost, or the value of any Variation, the Contractor's entitlement to extension of the Time for Completion or additional payment shall be reduced/rejected.

### **10.4. Valuation of Claims**

If the Contractor incurs Cost as a result of any of the Employer's Risks, the Contractor shall be entitled to the amount of such Cost. If as a result of any Employer's Risk, it is necessary to change the Works, this shall be dealt with as a Variation subject to Contractor's notification for intention of claim to the Engineer/Employer within fourteen (14) days of the occurrence of cause.

### **10.5 Variation and Claim Procedure**

The Contractor shall submit to the Engineer/Employer an itemized make-up of the value of variations and claims within twenty eight (28) days of the instruction or of the event giving rise to the claim. The Engineer/Employer shall check and if possible agree the value. In the absence of agreement, the Employer shall determine the value.

## **11. CONTRACT PRICE AND PAYMENT**

### **11.1 (a) Terms of Payments**

The amount due to the Contractor under any Interim Payment Certificate issued by the Engineer pursuant to this Clause, or to any other terms of the Contract, shall , subject to Clause 47, be paid by the Employer to the Contractor within 30 days after such Interim Payment Certificate has been jointly verified by Employer and Contractor, or, in the case of the

Final Certificate referred to in Sub Clause 60.8, within 60 days after such Final Payment Certificate has been jointly verified by Employer and Contractor; Provided that the Interim Payment shall be caused in 42 days and Final Payment in 60 days in case of foreign funded project. In the event of the failure of the Employer to make payment within the times stated, the Employer shall pay to the Contractor compensation at the 28 days rate of KIBOR+2% per annum in local currency and LIBOR+1% for foreign currency, upon all sums unpaid from the date by which the same should have been paid. The provisions of this Sub-Clause are without prejudice to the Contractor's entitlement under Clause 69.

(b) **Valuation of the Works**

The Works shall be valued as provided for in the Contract Data, subject to Clause 10.

**11.2 Monthly Statements**

The Contractor shall be entitled to be paid at monthly intervals:

- a) the value of the Works executed; and
- b) The percentage of the value of Materials and Plant reasonably delivered to the Site, as stated in the Contract Data, subject to any additions or deductions which may be due.

The Contractor shall submit each month to the Engineer/Employer a statement showing the amounts to which he considers himself entitled.

**11.3 Interim Payments**

Within a period not exceeding seven (7) days from the date of submission of a statement for interim payment by the Contractor, the Engineer shall verify the same and within a period not exceeding thirty (30) days from the said date of submission by the Contractor, the Employer shall pay to the Contractor the sum verified by the Engineer less retention money at the rate stated in the Contract Data.

**11.4 Retention**

Retention money shall be paid by the Employer to the Contractor within fourteen (14) days after either the expiry of the period stated in the Contract Data, or the remedying of notified defects, or the completion of outstanding work, all as referred to in Sub-Clause 9.1, which ever is the later.

**11.5 Final Payment**

Within twenty one (21) days from the date of issuance of the Maintenance



Certificate the Contractor shall submit a final account to the Engineer to verify and the Engineer shall verify the same within fourteen (14) days from the date of submission and forward the same to the Employer together with any documentation reasonably required to enable the Employer to ascertain the final contract value.

Within sixty (60) days from the date of receipt of the verified final account from the Engineer, the Employer shall pay to the Contractor any amount due to the Contractor. While making such payment the Employer may, for reasons to be given to the Contractor in writing, withhold any part or parts of the verified amount.

## **11.6 Currency**

Payment shall be in the currency stated in the Contract Data.

## **12. DEFAULT**

### **12.1 Default by Contractor**

If the Contractor abandons the Works, refuses or fails to comply with a valid instruction of the Engineer/Employer or fails to proceed expeditiously and without delay, or is, despite a written complaint, in breach of the Contract, the Employer may give notice referring to this Sub-Clause and stating the default.

If the Contractor has not taken all practicable steps to remedy the default within fourteen (14) days after receipt of the Employer's notice, the Employer may by a second notice given within a further twenty one (21) days, terminate the Contract. The Contractor shall then demobilize from the Site leaving behind any Contractor's Equipment which the Employer instructs, in the second notice, to be used for the completion of the Works at the risk and cost of the Contractor.

### **12.2 Default by Employer**

If the Employer fails to pay in accordance with the Contract, or is, despite a written complaint, in breach of the Contract, the Contractor may give notice referring to this Sub-Clause and stating the default. If the default is not remedied within fourteen (14) days after the Employer's receipt of this notice, the Contractor may suspend the execution of all or parts of the Works.

If the default is not remedied within twenty eight (28) days after the Employer's receipt of the Contractor's notice, the Contractor may by a second notice given within a further twenty one (21) days, terminate the Contract. The Contractor shall then demobilize from the Site.

### **12.3 Insolvency**

If a Party is declared insolvent under any applicable law, the other Party may by notice terminate the Contract immediately. The Contractor shall then demobilize from the Site leaving behind, in the case of the Contractor's insolvency, any Contractor's Equipment which the Employer instructs in the notice is to be used

for the completion of the Works.

#### **12.4 Payment upon Termination**

After termination, the Contractor shall be entitled to payment of the unpaid balance of the value of the Works executed and of the Materials and Plant reasonably delivered to the Site, adjusted by the following:

- a) any sums to which the Contractor is entitled under Sub-Clause 10.4,
- b) any sums to which the Employer is entitled,
- c) if the Employer has terminated under Sub-Clause 12.1 or 12.3, the Employer shall be entitled to a sum equivalent to twenty percent (20%) of the value of parts of the Works not executed at the date of the termination, and
- d) if the Contractor has terminated under Sub-Clause 12.2 or 12.3, the Contractor shall be entitled to the cost of his demobilization together with a sum equivalent to ten percent (10%) of the value of parts of the Works not executed at the date of termination.

The net balance due shall be paid or repaid within twenty eight (28) days of the notice of termination.

### **13. RISKS AND RESPONSIBILITIES**

#### **13.1 Contractor's Care of the Works**

Subject to Sub-Clause 9.1, the Contractor shall take full responsibility for the care of the Works from the **Commencement Date until the date of the Employer's/Engineer's issuance of Certificate of Completion under Sub-Clause 8.2. Responsibility shall then pass to the Employer.** If any loss or damage happens to the Works during the above period, the Contractor shall rectify such loss or damage so that the Works conform to the Contract.

Unless the loss or damage happens as a result of any of the Employer's Risks, the Contractor shall indemnify the Employer, or his agents against all claims loss, damage and expense arising out of the Works.

#### **13.2 Force Majeure**

If Force Majeure occurs, the Contractor shall notify the Engineer/Employer immediately. If necessary, the Contractor may suspend the execution of the Works and, to the extent agreed with the Employer demobilize the Contractor's Equipment.

If the event continues for a period of eighty four (84) days, either Party may then give notice of termination which shall take effect twenty eight (28) days after the giving of the notice.

After termination, the Contractor shall be entitled to payment of the unpaid

balance of the value of the Works executed and of the Materials and Plant reasonably delivered to the Site, adjusted by the following:

- a) any sums to which the Contractor is entitled under Sub-Clause 10.4,
- b) the cost of his demobilization, and
- c) less any sums to which the Employer is entitled.

The net balance due shall be paid or repaid within thirty five (35) days of the notice of termination.

## **14. INSURANCE**

### **14.1 Arrangements**

The Contractor shall, prior to commencing the Works, effect insurances of the types, in the amounts and naming as insured the persons stipulated in the Contract Data except for items (a) to (e) and (i) of the Employer's Risks under Sub-Clause 6.1. The policies shall be issued by insurers and in terms approved by the Employer. The Contractor shall provide the Engineer/Employer with evidence that any required policy is in force and that the premiums have been paid.

### **14.2 Default**

If the Contractor fails to effect or keep in force any of the insurances referred to in the previous Sub-Clause, or fails to provide satisfactory evidence, policies or receipts, the Employer may, without prejudice to any other right or remedy, effect insurance for the cover relevant to such as a default and pay the premiums due and recover the same plus a sum in percentage given in Contractor Data from any other amounts due to the Contractor.

## **15. RESOLUTION OF DISPUTES**

### **15.1 Engineer's Decision**

If a dispute of any kind whatsoever arises between the Employer and the Contractor in connection with the Works, the matter in dispute shall, in the first place, be referred in writing to the Engineer, with a copy to the other party. Such reference shall state that it is made pursuant to this Clause. No later than the twenty eight (28) days after the day on which he received such reference, the Engineer shall give notice of his decision to the Employer and the Contractor.

Unless the Contract has already been repudiated or terminated, the Contractor shall, in every case, continue to proceed with the Work with all due diligence, and the Contractor and the Employer shall give effect forthwith to every such decision of the Engineer unless and until the same shall be revised, as hereinafter provided in an arbitral award.

## **15.2 Notice of Dissatisfaction**

If a Party is dissatisfied with the decision of the Engineer or if no decision is given within the time set out in Sub-Clause 15.1 here above, the Party may give notice of dissatisfaction referring to this Sub-Clause within fourteen (14) days of receipt of the decision or the expiry of the time for the decision. If no notice of dissatisfaction is given within the specified time, the decision shall be final and binding on the Parties. If notice of dissatisfaction is given within the specified time, the decision shall be binding on the Parties who shall give effect to it without delay unless and until the decision of the Engineer is revised by an arbitrator.

## **15.3 Arbitration**

A dispute which has been the subject of a notice of dissatisfaction shall be finally settled as per provisions of Arbitration Act 1940 (Act No. X of 1940) and Rules made there under and any statutory modifications thereto. Any hearing shall be held at the place specified in the Contract Data and in the language referred to in Sub-Clause 1.5.

## **16 INTEGRITY PACT**

### **16.1 If the Contractor or any of his Sub-Contractors, agents or servants is found to have violated or involved in violation of the Integrity Pact signed by the Contractor as Schedule-F to his Bid, then the Employer shall be entitled to:**

- (a) recover from the Contractor an amount equivalent to ten times the sum of any commission, gratification, bribe, finder's fee or kickback given by the Contractor or any of his Sub-Contractors, agents or servants;
- (b) terminate the Contract; and
- (c) recover from the Contractor any loss or damage to the Employer as a result of such termination or of any other corrupt business practices of the Contractor or any of his Sub-Contractors, agents or servants.

On termination of the Contract under Sub-Para (b) of this Sub-Clause, the Contractor shall demobilize from the Site leaving behind Contractor's Equipment which the Employer instructs, in the termination notice, to be used for the completion of the Works at the risk and cost of the Contractor. Payment upon such termination shall be made under Sub-Clause 12.4, in accordance with Sub-Para (c) thereof, after having deducted the amounts due to the Employer under Sub-Para (a) and (c) of this Sub-Clause.

## CONTRACT DATA

(Note: Except where otherwise indicated, all Contract Data should be filled in by the Employer prior to issuance of the Bidding Documents.)

### Sub-Clauses of

#### Conditions of Contract

1.1.3 Employer's Drawings, if any  
(Drawings issued with Work Order)

1.1.4 **The Employer** means  
Quaid-e-Awam University of Engineering Science & Technology, Nawabshah.

1.1.5 **The Contractor** means

\_\_\_\_\_

\_\_\_\_\_

1.1.7 **Commencement Date** means the date of issue of Engineer's Notice to Commence which shall be issued within fourteen (14) days of the signing of the Contract Agreement.

1.1.9 **Time for Completion** 18 months

1.1.20 **Engineer**

Executive Engineer

1.3 **Documents forming the Contract listed in the order of priority:**

- (a) The Contract Agreement
- (b) Letter of Acceptance
- (c) The completed Form of Bid
- (d) Contract Data
- (e) Conditions of Contract
- (f) The completed Schedules to Bid including Schedule of Prices/ BOQ
- (g) The Drawings,
- (h) The Specifications
- (i) \_\_\_\_\_
- (j) \_\_\_\_\_

2.1 **Provision of Site:** On the Commencement Date -----/ -----/2022

3.1 **Authorized person :** -----

3.2 **Name and address of Engineer's/Employer's representative**

Engr. Hamood ur Rahman Kazi, Project Coordinator  
QUEST, Nawabshah

4.4 **Performance Security: 10%**

Amount \_\_\_\_\_

Validity \_\_\_\_\_

5.1 **Requirements for Contractor's design (if any):**

Specification Clause No's (As Per demand of the Employer)

- 7.2 **Programme:** Shall be submitted before commencement.  
**Time for submission:** Within fourteen (14) days of the Commencement Date.  
**Form of programme:** \_\_\_\_\_(Bar Chart/CPM/PERT or other)
- 7.4 Amount payable due to failure to complete shall be 0.1% per day up to a maximum of (10%) \* of sum stated in the Letter of Acceptance
- 9.1 **Period for remedying defects**  
30 Days
- 10.2 **Variation procedure:**  
Day work rates \_\_\_\_\_  
\_\_\_\_\_ (as per current policy of PEC)
- 11.1 (a) Terms of Payments**  
Payment of Contract Price shall be made in the following manners:  
i) 10% mobilization advance shall be paid on submission of bank guarantee from scheduled bank of Pakistan by the Employer to the Contractor and the same will be recovered at the rate of 15% of work done from each Interim Payment.  
ii) Ninety (90%) of interim payment shall be made and (10%) ten percent will be retained as retention money.  
iii) Fifty percent (50%) of retention money shall be paid on the date of issuance of taking-over certificate as per Clause 8.2 of Conditions of Contract, and  
iv) Balance Fifty percent (50%) of retention money shall be paid in accordance with Clause 11.4 of Conditions of Contract, issuance of completion certificate and expiry of defect liability period.
- 11.1 (a) **Monthly Interim Payment** will be submitted by the Contractor for verification of the Employer/Engineer.
- 11.2 (b) Secured Advance**  
Following Percentages will be paid on the value of Materials and Plant and same will be recovered on the actual incorporation in the works:  
Materials eighty (80%) max  
Plant ninety (90%) max
- 11.3 **Interim Payment** will be released within (30) thirty days from the date of due verification of the Engineer.
- 11.4 **Percentage of retention:** Balance five (05%) of retention money will be released on the issuance of completion certificate and expiry of defect liability period.
- 11.6 **Currency of payment:** Pak. Rupees
- 14.1 **Insurances: Deleted because of small work.**
- 15.3 **Arbitration**  
Place of Arbitration: \_\_\_\_\_

## **STANDARD FORMS**

**FORM OF BID SECURITY**  
(Bank Guarantee)

Guarantee No. \_\_\_\_\_  
Executed on \_\_\_\_\_

(Letter by the Guarantor to the Employer)

Name of Guarantor (Scheduled Bank in Pakistan) with address:

\_\_\_\_\_

Name of Principal (Bidder) with address:

\_\_\_\_\_

Penal Sum of Security (express in words and figures):

\_\_\_\_\_

Bid Reference No. \_\_\_\_\_ Date of Bid \_\_\_\_\_

KNOW ALL MEN BY THESE PRESENTS, that in pursuance of the terms of the Bid and at the request of the said Principal, we the Guarantor above-named are held and firmly bound unto the \_\_\_\_\_, (hereinafter called The "Employer") in the sum stated above, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that whereas the Principal has submitted the accompanying Bid numbered and dated as above for \_\_\_\_\_ (Particulars of Bid) to the said Employer; and

WHEREAS, the Employer has required as a condition for considering the said Bid that the Principal furnishes a Bid Security in the above said sum to the Employer, conditioned as under:

- (1) that the Bid Security shall remain valid for a period of twenty eight (28) days beyond the period of validity of the bid;
- (2) that in the event of;
  - (a) the Principal withdraws his Bid during the period of validity of Bid, or
  - (b) the Principal does not accept the correction of his Bid Price, pursuant to Sub-Clause 16.4 (b) of Instructions to Bidders, or
  - (c) failure of the successful bidder to
    - (i) furnish the required Performance Security, in accordance with Sub-Clause IB-21.1 of Instructions to Bidders, or
    - (ii) sign the proposed Contract Agreement, in accordance with Sub-Clauses IB-20.2 & 20.3 of Instructions to Bidders,



the entire sum be paid immediately to the said Employer for delayed completion and not as penalty for the successful bidder's failure to perform.

NOW THEREFORE, if the successful bidder shall, within the period specified therefore, on the prescribed form presented to him for signature enter into a formal Contract Agreement with the said Employer in accordance with his Bid as accepted and furnish within fourteen (14) days of receipt of Letter of Acceptance, a Performance Security with good and sufficient surety, as may be required, upon the form prescribed by the said Employer for the faithful performance and proper fulfilment of the said Contract or in the event of non-withdrawal of the said Bid within the time specified then this obligation shall be void and of no effect, but otherwise to remain in full force and effect.

PROVIDED THAT the Guarantor shall forthwith pay to the Employer the said sum stated above upon first written demand of the Employer without cavil or argument and without requiring the Employer to prove or to show grounds or reasons for such demand, notice of which shall be sent by the Employer by registered post duly addressed to the Guarantor at its address given above.

PROVIDED ALSO THAT the Employer shall be the sole and final judge for deciding whether the Principal has duly performed his obligations to sign the Contract Agreement and to furnish the requisite Performance Security within the time stated above, or has defaulted in fulfilling said requirements and the Guarantor shall pay without objection the sum stated above upon first written demand from the Employer forthwith and without any reference to the Principal or any other person.

IN WITNESS WHEREOF, the above bounded Guarantor has executed the instrument under its seal on the date indicated above, the name and seal of the Guarantor being hereto affixed and these presents duly signed by its undersigned representative pursuant to authority of its governing body.

\_\_\_\_\_  
Guarantor (Bank)

Witness:

1. Signature \_\_\_\_\_

1. \_\_\_\_\_

2. Name \_\_\_\_\_

\_\_\_\_\_  
Corporate Secretary (Seal)

3. Title \_\_\_\_\_

2. \_\_\_\_\_

\_\_\_\_\_  
(Name, Title & Address)

Corporate Guarantor (Seal)

**FORM OF PERFORMANCE SECURITY  
(Bank Guarantee)**

Guarantee No. \_\_\_\_\_  
Executed on \_\_\_\_\_

(Letter by the Guarantor to the Employer)

Name of Guarantor (Scheduled Bank in Pakistan) with  
address: \_\_\_\_\_

Name of Principal (Contractor) with  
address: \_\_\_\_\_

Penal Sum of Security (express in words and  
figures) \_\_\_\_\_

Letter of Acceptance No. \_\_\_\_\_ Dated: \_\_\_\_\_

KNOW ALL MEN BY THESE PRESENTS, that in pursuance of the terms of the Bidding Documents and above said Letter of Acceptance (hereinafter called the Documents) and at the request of the said Principal we, the Guarantor above named, are held and firmly bound unto the \_\_\_\_\_ (hereinafter called the Employer) in the penal sum of the amount stated above, for the payment of which sum well and truly to be made to the said Employer, we bind ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that whereas the Principal has accepted the Employer's above said Letter of Acceptance for \_\_\_\_\_ (Name of Contract) for the \_\_\_\_\_ (Name of Project).

NOW THEREFORE, if the Principal (Contractor) shall well and truly perform and fulfill all the undertakings, covenants, terms and conditions of the said Documents during the original terms of the said Documents and any extensions thereof that may be granted by the Employer, with or without notice to the Guarantor, which notice is, hereby, waived and shall also well and truly perform and fulfill all the undertakings, covenants terms and conditions of the Contract and of any and all modifications of the said Documents that may hereafter be made, notice of which modifications to the Guarantor being hereby waived, then, this obligation to be void; otherwise to remain in full force and virtue till all requirements of Clause 9, Remedying Defects, of Conditions of Contract are fulfilled.

Our total liability under this Guarantee is limited to the sum stated above and it is a condition of any liability attaching to us under this Guarantee that the claim for payment in writing shall be received by us within the validity period of this Guarantee, failing which we shall be discharged of our liability, if any, under this Guarantee.

We, \_\_\_\_\_ (the Guarantor), waiving all objections and defenses under the Contract, do hereby irrevocably and independently guarantee to pay to the Employer without delay upon the Employer's first written demand without cavil or arguments and without requiring the Employer to prove or to show grounds or reasons for such demand any sum or sums up to the amount stated above, against the Employer's written declaration that the Principal has refused or failed to perform the obligations under the Contract, for which payment will be effected by the Guarantor to Employer's designated Bank & Account Number.

PROVIDED ALSO THAT the Employer shall be the sole and final judge for deciding whether the Principal (Contractor) has duly performed his obligations under the Contract or has defaulted in fulfilling said obligations and the Guarantor shall pay without objection any sum or sums up to the amount stated above upon first written demand from the Employer forthwith and without any reference to the Principal or any other person.

IN WITNESS WHEREOF, the above bounded Guarantor has executed this Instrument under its seal on the date indicated above, the name and corporate seal of the Guarantor being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

	_____ Guarantor (Bank)
Witness:	
1. _____	1. Signature _____
_____	2. Name _____
Corporate Secretary (Seal)	3. Title _____
2. _____	
_____	_____
(Name, Title & Address)	Corporate Guarantor (Seal)

**MOBILIZATION ADVANCE GUARANTEE/BOND**

Guarantee No. \_\_\_\_\_ Date \_\_\_\_\_

WHEREAS \_\_\_\_\_ (hereinafter called the 'Employer') has entered into a Contract for \_\_\_\_\_  
(Particulars of Contract)  
with \_\_\_\_\_ (hereinafter called the "Contractor").

AND WHEREAS, the Employer has agreed to advance to the Contractor, at the Contractor's request, an amount of Rupees \_\_\_\_\_ (Rs \_\_\_\_\_) which amount shall be advanced to the Contractor as per provisions of the Contract.

AND WHEREAS, the Employer has asked the Contractor to furnish Guarantee to secure the mobilization advance for the performance of his obligations under the said Contract.

AND WHEREAS, \_\_\_\_\_  
(Scheduled Bank in Pakistan or Insurance Company acceptable to the Employer)  
(hereinafter called the "Guarantor") at the request of the Contractor and in consideration of the Employer agreeing to make the above advance to the Contractor, has agreed to furnish the said Guarantee.

NOW, THEREFORE, the Guarantor hereby guarantees that the Contractor shall use the advance for the purpose of above mentioned Contract and if he fails and commits default in fulfilment of any of his obligations for which the advance payment is made, the Guarantor shall be liable to the Employer for payment not exceeding the aforementioned amount.

Notice in writing of any default, of which the Employer shall be the sole and final judge, on the part of the Contractor, shall be given by the Employer to the Guarantor, and on such first written demand, payment shall be made by the Guarantor of all sums then due under this Guarantee without any reference to the Contractor and without any objection.

This Guarantee shall remain in force until the advance is fully adjusted against payments from the Interim Payment Certificates of the Contractor or until \_\_\_\_\_ whichever is earlier.

(Date)

The Guarantor's liability under this Guarantee shall not in any case exceed the sum of Rupees \_\_\_\_\_ (Rs \_\_\_\_\_).

This Guarantee shall remain valid up to the aforesaid date and shall be null and void after the aforesaid date or earlier if the advance made to the Contractor is fully adjusted against payments from Interim Payment Certificates of the Contractor provided that the Guarantor agrees that the aforesaid period of validity shall be deemed to be extended if on the above mentioned date the advance payment is not fully adjusted.

GUARANTOR

- 1. Signature \_\_\_\_\_
- 2. Name \_\_\_\_\_
- 3. Title \_\_\_\_\_

WITNESS

1. \_\_\_\_\_  
Corporate Secretary (Seal)

2. \_\_\_\_\_  
(Name Title & Address)

\_\_\_\_\_  
Corporate Guarantor(Seal)

## FORM OF CONTRACT AGREEMENT

THIS CONTRACT AGREEMENT (hereinafter called the "Agreement") made on the day of \_\_\_\_\_ 2022 \_\_\_\_\_ between \_\_\_\_\_ (hereinafter called the "Employer") of the one part and \_\_\_\_\_ (hereinafter called the "Contractor") of the other part.

WHEREAS the Employer is desirous that certain Works, viz \_\_\_\_\_ should be executed by the Contractor and has accepted a Bid by the Contractor for the execution and completion of such Works and the remedying of any defects therein.

NOW this Agreement witnessed as follows:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract hereinafter referred to.
2. The following documents after incorporating addenda, if any except those parts relating to Instructions to Bidders, shall be deemed to form and be read and construed as part of this Agreement, viz:
  - (a) The Letter of Acceptance;
  - (b) The completed Form of Bid alongwith Schedules to Bid;
  - (c) Conditions of Contract & Contract Data;
  - (d) The priced Schedule of Prices;
  - (e) The Specifications; and
  - (f) The Drawings
3. In consideration of the payments to be made by the Employer to the Contractor as hereinafter mentioned, the Contractor hereby covenants with the Employer to execute and complete the Works and remedy defects therein in conformity and in all respects within the provisions of the Contract.
4. The Employer hereby covenants to pay the Contractor, in consideration of the execution and completion of the Works as per provisions of the Contract, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

IN WITNESS WHEREOF the parties hereto have caused this Contract Agreement to be executed on the day, month and year first before written in accordance with their respective laws.

Signature of the Contactor

\_\_\_\_\_  
(Seal)

Signature of the Employer

\_\_\_\_\_  
(Seal)

Signed, Sealed and Delivered in the presence of:

Witness:

\_\_\_\_\_

(Name, Title and Address)

Witness:

\_\_\_\_\_

(Name, Title and Address)

**FORM OF BANK GUARANTEE FOR ADVANCE PAYMENT  
(Not Applicable)**

Guarantee No. \_\_\_\_\_

Executed on \_\_\_\_\_

(Letter by the Guarantor to the Employer)

WHEREAS the \_\_\_\_\_ (hereinafter called the Employer) has entered into a Contract for \_\_\_\_\_

\_\_\_\_\_ (Particulars of Contract), with

\_\_\_\_\_ (hereinafter called the Contractor).

AND WHEREAS the Employer has agreed to advance to the Contractor, at the Contractor's request, an amount of Rs. \_\_\_\_\_ Rupees \_\_\_\_\_) which amount shall be advanced to the Contractor as per provisions of the Contract.

AND WHEREAS the Employer has asked the Contractor to furnish Guarantee to secure the advance payment for the performance of his obligations under the said Contract.

AND WHEREAS \_\_\_\_\_ (Scheduled Bank) (hereinafter called the Guarantor) at the request of the Contractor and in consideration of the Employer agreeing to make the above advance to the Contractor, has agreed to furnish the said Guarantee.

NOW THEREFORE the Guarantor hereby guarantees that the Contractor shall use the advance for the purpose of above mentioned Contract and if he fails, and commits default in fulfillment of any of his obligations for which the advance payment is made, the Guarantor shall be liable to the Employer for payment not exceeding the aforementioned amount.

Notice in writing of any default, of which the Employer shall be the sole and final judge, as aforesaid, on the part of the Contractor, shall be given by the Employer to the Guarantor, and on such first written demand payment shall be made by the Guarantor of all sums then due under this Guarantee without any reference to the Contractor and without any objection.

This Guarantee shall come into force as soon as the advance payment has been credited to the account of the Contractor.

This Guarantee shall expire not later than \_\_\_\_\_



by which date we must have received any claims by registered letter, telegram, telex or telefax.

It is understood that you will return this Guarantee to us on expiry or after settlement of the total amount to be claimed hereunder.

	<u>Guarantor (Scheduled Bank)</u>
Witness:	
1. _____	1. Signature _____
_____	2. Name _____
Corporate Secretary (Seal)	3. Title _____
2. _____	
_____	
(Name, Title & Address)	Corporate Guarantor (Seal)

**Technical Evaluation Criteria**

**BG-1**

**Appendix-G to Bid**

**LIST OF MAJOR EQUIPMENT – RELATED ITEMS**

The Bidder will provide a list of all major equipment and related items, under separate heading for items owned, to be purchased or to be arranged on lease by him to carry out the Works. The information shall include make, type, capacity, and anticipated period of utilization for all equipment which shall be in sufficient detail to demonstrate fully that the equipment will meet all requirements of the Specifications.

**LIST OF MAJOR EQUIPMENT**

<b>Owned Purchased or Leased</b>	<b>Description of Unit (Make, Model, Year)</b>	<b>Capacity HP Rating</b>	<b>Condition</b>	<b>Present Location or Source</b>	<b>Date of Delivery at Site</b>	<b>Period of Work on Project</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
a. Owned						
b. To be Purchased						
c. To be arranged on Lease						

**Equipment:**

The Bidder must demonstrate that it has the key equipment listed hereafter:

No.	PLANT/EQUIPMENT				
	Equipment Type and Characteristics	Total Nos. available	Under Utilization on other projects, if applicable	Nos. waiting to be shifted to new project(s)	Min. Number Required for this Project
1					
2					
3					
4					
5					
6					

**FINANCIAL COMPETENCE AND ACCESS TO FINANCIAL RESOURCES**

The financial position of the bidder shall be checked as per following details:

**1. SOUNDNESS AND ACCESS TO FINANCIAL RESOURCES:**

“The Bidder must demonstrate access to, or availability of, financial resources such as liquid assets, unencumbered real assets, lines of credits, and other financial means, other than any contractual advance payments, to meet the financial requirements of the contract in the amount of his bid. As a minimum the Bidder must show that his resources, in term of at least his latest years working capital and line of credits, will be adequate to cover an amount equivalent to his bid price and current work commitments i.e.

[5 x working capital + Project specific lines of credit\*– 40% of current contract commitments] > Bid price.

Working capital is the difference between current assets and current liabilities and measures the firm’s ability to generate cash in the short term.”

\*Any line of credit indicated for this (tendered) project needs to have been certified by the Bank and the said certificate is enclosed with this Appendix.

**2. AVERAGE ANNUAL CONSTRUCTION TURNOVER**

<b><u>Criteria</u></b>	<b><u>Bidders’ to list their certified yearly turnover for last 5 years</u></b>
Minimum average annual construction turnover at least twice of the estimated cost Calculated as total certified payments received for contracts in progress or completed, within the last 5 years.	

**PAST PERFORMANCE, CURRENT COMMITMENT, QUALIFICATION AND EXPERIENCE**

**1) General Construction Experience**

<b>Requirement</b>	<b>Bidder to Provide details</b>	<b>Role</b>
Experience under construction contracts in the role of contractor, subcontractor, or management contractor for at least the last 5 years prior to the bid submission deadline.		

**2) Contracts of Similar Size and Nature**

<b>Requirement</b>	<b>Bidder to provide specific details</b>	<b>Role</b>
Participation as contractor, management contractor, or subcontractor, in at least 2 Contracts within the last 5 years, each with a value of at least twice of estimated cost of the bid that has been successfully or is substantially completed and that are similar to the proposed works. The similarity shall be based on the physical size, complexity, methods, technology or other characteristics as indicated in these Bidding Documents.		

### 3) Personnel

No.	Position	Total No in the Firm	Minimum requirement for the Project*	Total Work Experience [years]	Nos. already posted on other projects	Nos. being allocated for this project	Professional credits points*
1							
2							
3							
4							
5							

The Bidder must demonstrate that it has the personnel for the key positions that meet the following requirements:

## 4) Data regarding past performance and present commitment of the Bidders:

Present Commitment								
Sr No.	Name of ongoing project(s)	Name of Employer	Date of		Progress		Remarks regarding delays if applicable	Satisfactory performance certificate from employer (Minimum requirement)
			Start	Completion	%Age as planned	%Age at actual		
1.								
2.								
3.								
4.								
5.								

Number of projects that a bidder can undertake to construct as per PEC works by laws is aggregate Professional Credit Points (PCPs) authorized for a category of licensee divided by the PCP of construction and capital cost of single project under consideration.

For example C-3 category contractor should have a minimum of 20 PCPs as per table 'A' below from the Bye Laws/S.R.O. 568(I)/87 at all times and the PCP of individual project (costing say 400 million rupees) is 5 calculated on the basis of 1 PCP for every 20 million project cost. It means the contractor can have ongoing projects up to 4 ( $20 \div 5$ ) number of this size.

Table A:-

Contractor's Category	Limit of Construction Cost of Project (Million rupees)	Average annual value of work for last 3 years (million rupees)	Largest project value during last 5 years (Million rupees)	Paid up capital or net/capital worth (million rupees)	Minimum requirement of professional credit points (PCP credit)
C-3	Up to 400	10	20	5	20

The evaluation of the personnel shall be carried out as per PEC Engineering Bye Laws 1987 and review his qualification accordingly. PCP/ minimum requirement of staff required for the contractor's works in hand should be in accordance with the provisions of PEC's works byelaws. For example, subject to the other conditional points and limits, a single registered Engineer is given 1 PCP for each year of experience in the construction and operation of engineering works (subject to a minimum of 10 PCPs and maximum of 30 PCPs). The contractor setup has to meet the minimum PCP requirements all time during the currency of the contract for engineering staff to be deployed/ already deployed.

**\*All other mandatory documents are mentioned in the NIT.**

**FORMS**

**BID SECURITY  
PERFORMANCE SECURITY  
CONTRACT AGREEMENT  
MOBILIZATION ADVANCE GUARANTEE/BOND  
AND  
INDEMNITY BOND FOR SECURED ADVANCE**



**BID SECURITY**  
**(Bank Guarantee)**

Security Executed on \_\_\_\_\_  
(Date)

Name of Surety (Bank) with Address: \_\_\_\_\_  
(Scheduled Bank in Pakistan)

Name of Principal (Bidder) with Address \_\_\_\_\_

Penal Sum of Security Rupees . \_\_\_\_\_ (Rs. \_\_\_\_\_)

Bid Reference No. \_\_\_\_\_

KNOW ALL MEN BY THESE PRESENTS, that in pursuance of the terms of the Bid and at the request of the said Principal (Bidder) we, the Surety above named, are held and firmly bound unto \_\_\_\_\_

(hereinafter called the 'Employer') in the sum stated above for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that whereas the Bidder has submitted the accompanying Bid dated \_\_\_\_\_ for Bid No. \_\_\_\_\_ for \_\_\_\_\_ (Particulars of Bid) to the said Employer; and

WHEREAS, the Employer has required as a condition for considering said Bid that the Bidder furnishes a Bid Security in the above said sum from a Scheduled Bank in Pakistan or from a foreign bank duly counter-guaranteed by a Scheduled Bank in Pakistan, to the Employer, conditioned as under:

- (1) that the Bid Security shall remain in force up to and including the date 28 days after the deadline for validity of bids as stated in the Instructions to Bidders or as it may be extended by the Employer, notice of which extension(s) to the Surety is hereby waived;
- (2) that the Bid Security of unsuccessful Bidders will be returned by the Employer after expiry of its validity or upon signing of the Contract Agreement; and
- (3) that in the event of failure of the successful Bidder to execute the proposed Contract Agreement for such work and furnish the required Performance Security, the entire said sum be paid immediately to the said Employer pursuant to Clause 15.6 of the Instruction to Bidders for the successful Bidder's failure to perform.

NOW THEREFORE, if the successful Bidder shall, within the period specified therefore, on the prescribed form presented to him for signature enter into a formal Contract with the said Employer in accordance with his Bid as accepted and furnish within twenty eight (28) days of his being requested to do so, a Performance Security with good and sufficient surety, as may be required, upon the form prescribed by the said Employer for the faithful performance and proper fulfilment of the said Contract or in the event of non-withdrawal of the said Bid within the time specified for its validity then this obligation shall be void and of no effect, but otherwise to remain in full force and effect.

PROVIDED THAT the Surety shall forthwith pay the Employer, the said sum upon first written demand of the Employer (without cavil or argument) and without requiring the Employer to prove or to show grounds or reasons for such demand, notice of which shall be sent by the Employer by registered post duly addressed to the Surety at its address given above.

PROVIDED ALSO THAT the Employer shall be the sole and final judge for deciding whether the Principal (Bidder) has duly performed his obligations to sign the Contract Agreement and to furnish the requisite Performance Security within the time stated above, or has defaulted in fulfilling said requirements and the Surety shall pay without objection the said sum upon demand from the Employer forthwith and without any reference to the Principal (Bidder) or any other person.

IN WITNESS WHEREOF, the above bounden Surety has executed the instrument under its seal on the date indicated above, the name and seal of the Surety being hereto affixed and these presents duly signed by its undersigned representative pursuant to authority of its governing body.

SURETY (Bank)

WITNESS:

Signature \_\_\_\_\_

1. \_\_\_\_\_

Name \_\_\_\_\_

\_\_\_\_\_

Title \_\_\_\_\_

Corporate Secretary (Seal)

Corporate Guarantor (Seal)

2. \_\_\_\_\_

\_\_\_\_\_  
Name, Title & Address

**FORM OF PERFORMANCE SECURITY  
(Bank Guarantee)**

Guarantee  
No. \_\_\_\_\_  
Executed on \_\_\_\_\_  
Expiry date \_\_\_\_\_

[Letter by the Guarantor to the Employer]

Name of Guarantor (Bank) with address: \_\_\_\_\_  
(Scheduled Bank in Pakistan)

Name of Principal (Contractor) with address: \_\_\_\_\_

Penal Sum of Security (express in words and figures) \_\_\_\_\_

Letter of Acceptance No. \_\_\_\_\_ Dated \_\_\_\_\_

KNOW ALL MEN BY THESE PRESENTS, that in pursuance of the terms of the Bidding Documents and above said Letter of Acceptance (hereinafter called the Documents) and at the request of the said Principal we, the Guarantor above named, are held and firmly bound unto the \_\_\_\_\_ (hereinafter called the Employer) in the penal sum of the amount stated above for the payment of which sum well and truly to be made to the said Employer, we bind ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that whereas the Principal has accepted the Employer's above said Letter of Acceptance for \_\_\_\_\_ (Name of Contract) for the \_\_\_\_\_ (Name of Project).

NOW THEREFORE, if the Principal (Contractor) shall well and truly perform and fulfill all the undertakings, covenants, terms and conditions of the said Documents during the original terms of the said Documents and any extensions thereof that may be granted by the Employer, with or without notice to the Guarantor, which notice is, hereby, waived and shall also well and truly perform and fulfill all the undertakings, covenants terms and conditions of the Contract and of any and all modifications of said Documents that may hereafter be made, notice of which modifications to the Guarantor being hereby waived, then, this obligation to be void; otherwise to remain in full force and virtue till all requirements of Clause 49, Defects Liability, of Conditions of Contract are fulfilled.

Our total liability under this Guarantee is limited to the sum stated above and it is a condition of any liability attaching to us under this Guarantee that the claim for payment in writing shall be received by us within the validity period of this Guarantee, failing which we shall be discharged of our liability, if any, under this Guarantee.

We, \_\_\_\_\_ (the Guarantor), waiving all objections and defences under the Contract, do hereby irrevocably and independently guarantee to pay to the Employer without delay upon the Employer's first written demand without cavil or arguments and without requiring the Employer to prove or to show grounds or reasons for such demand any sum or sums up to the amount stated above, against the Employer's written declaration that the Principal has refused or failed to perform the obligations under the Contract which payment will be effected by the Guarantor to Employer's designated Bank & Account Number.

PROVIDED ALSO THAT the Employer shall be the sole and final judge for deciding whether the Principal (Contractor) has duly performed his obligations under the Contract or has defaulted in fulfilling said obligations and the Guarantor shall pay without objection any sum or sums up to the amount stated above upon first written demand from the Employer forthwith and without any reference to the Principal or any other person.

IN WITNESS WHEREOF, the above-bounden Guarantor has executed this Instrument under its seal on the date indicated above, the name and corporate seal of the Guarantor being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

	_____ Guarantor (Bank)
Witness:	
1. _____	Signature _____
_____	Name _____
Corporate Secretary (Seal)	Title _____
2. _____	
_____	_____
Name, Title & Address	Corporate Guarantor (Seal)

## FORM OF CONTRACT AGREEMENT

THIS CONTRACT AGREEMENT (hereinafter called the "Agreement") made on the \_\_\_\_\_ day of \_\_\_\_\_ (month) 20\_\_\_\_ between \_\_\_\_\_ (hereafter called the "Employer") of the one part and \_\_\_\_\_ (hereafter called the "Contractor") of the other part.

WHEREAS the Employer is desirous that certain Works, viz \_\_\_\_\_ should be executed by the Contractor and has accepted a Bid by the Contractor for the execution and completion of such Works and the remedying of any defects therein.

NOW this Agreement witnesseth as follows:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract hereinafter referred to.
2. The following documents after incorporating addenda / Clarification as agreed or otherwise, if any, except those parts relating to Instructions to Bidders shall be deemed to form and be read and construed as part of this Contract, viz:
  - (a) The Contract Agreement;
  - (b) The Letter of Acceptance;
  - (c) The completed Form of Bid;
  - (d) Special Stipulations (Appendix-A to Bid);
  - (e) The Particular Conditions of Contract – Part II;
  - (f) The General Conditions – Part I;
  - (g) The priced Bill of Quantities (Appendix-D to Bid);
  - (h) The completed Appendices to Bid (B, C, E to O);
  - (i) The Drawings;
  - (j) The Specifications.
  - (k) \_\_\_\_\_ (any other)
3. In consideration of the payments to be made by the Employer to the Contractor as hereinafter mentioned, the Contractor hereby covenants with the Employer to execute and complete the Works and remedy defects therein in conformity and in all respects with the provisions of the Contract.
4. The Employer hereby covenants to pay the Contractor, in consideration of the execution and completion of the Works as per provisions of the Contract, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

IN WITNESS WHEREOF the parties hereto have caused this Agreement to be executed on the day, month and year first before written in accordance with their respective laws.

Signature of the Contactor

\_\_\_\_\_  
(Seal)

Signature of Employer

\_\_\_\_\_  
(Seal)

Signed, Sealed and Delivered in the presence of:

Witness:

\_\_\_\_\_

(Name, Title and Address)

Witness:

\_\_\_\_\_

(Name, Title and Address)

**INDEMNITY BOND  
FOR SECURED ADVANCE  
AGAINST MATERIALS BROUGHT AT SITE**

(ON RS.40 NONJUDICIAL STAMP PAPER)

This Deed of Indemnity is issued by M/s. \_\_\_\_\_  
 \_\_\_\_\_ (Name of the Contractor) in favour  
 of M/s. \_\_\_\_\_ (Name of the Employer).

**Whereas** \_\_\_\_\_ (hereinafter called the Employer) has paid the Secured Advance against the cost of material through any Bank or like agency by any other method by virtue of the terms of the contract existing between the parties. The details of the material and their price for which secured advance is being sought for the period \_\_\_\_\_ till consumption of the material is as under:-

1. \_\_\_\_\_ at Rs. \_\_\_\_\_ per \_\_\_\_\_ = Rs.
2. \_\_\_\_\_ at Rs. \_\_\_\_\_ per \_\_\_\_\_ = Rs.
3. \_\_\_\_\_ at Rs. \_\_\_\_\_ per \_\_\_\_\_ = Rs.
4. \_\_\_\_\_ at Rs. \_\_\_\_\_ per \_\_\_\_\_ = Rs.

**THEREFORE THIS DEED OF INDEMNITY WITNESSETH AS FOLLOWS:**

I/We \_\_\_\_\_ of M/s. \_\_\_\_\_ do hereby indemnify M/s \_\_\_\_\_ for all losses due to thefts, arson, pilferage, loss due to flood and inundation, shortage, deterioration and depreciation etc. through any act of Man or God or slump in the Market of any or all the materials financed or paid by the Employer on our request for financing payment against material.

I/We \_\_\_\_\_ shall indemnify \_\_\_\_\_ against any or all claims, action damages arising out of or resulting to the said material.

I/We \_\_\_\_\_ further declare that we will faithfully abide by the above declaration and solemnly affirm that we will not remove, sell, pilferage any of the materials against which M/s \_\_\_\_\_ has paid us such a secured advance and will not pledge the same with any Bank, Finance Corporation, Firm, Company, Individual or the like agency or create any change whereon in any from what so ever.

I/We \_\_\_\_\_ do hereby also declare that in the event of my/our infringement of the declaration made above \_\_\_\_\_ will be entitled to forfeit all such material and also proceed against me/us according to the relevant clause pertaining to breach of contract and further invoke the power or seek any remedies secured of \_\_\_\_\_ under the contract Agreement signed with us or otherwise available under law.

Place \_\_\_\_\_ Dated \_\_\_\_\_

Contractor \_\_\_\_\_

## [Notes on the Conditions of Contract]

The Conditions of Contract comprise two parts:

- (a) **Part I - General Conditions of Contract**
- (b) **Part II - Particular Conditions of Contract**

Over the years, a number of “model” General Conditions of Contract have evolved. The one used in these Standard Bidding Documents was prepared by the International Federation of Consulting Engineers (Federation Internationale des Ingenieurs-Conseils, or FIDIC), and is commonly known as the FIDIC Conditions of Contract. (The used version is the fourth edition, 1987, reprinted in 1992 with further amendments).

The FIDIC Conditions of Contract have been prepared for an ad measurement (unit price or unit rate) type of contract, and cannot be used without major modifications for other types of contract, such as lump sum, turnkey, or target cost contracts.

The standard text of the General Conditions of Contract chosen must be retained intact to facilitate its reading and interpretation by bidders and its review by the Client. Any amendments and additions to the General Conditions, specific to the contract in hand, should be introduced in the Particular Conditions of Contract.

The use of standard conditions of contract for all civil Works will ensure comprehensiveness of coverage, better balance of rights or obligations between Employer and Contractor, general acceptability of its provisions, and savings in time and cost for bid preparation and review, leading to more economic prices.

The FIDIC Conditions of Contract are copyrighted and may not be copied, faxed, or reproduced. Without taking any responsibility of its being accurate, Pakistan Engineering Council with prior consent of FIDIC Secretariat, has reproduced herein the FIDIC General **Conditions of Contract for reference purpose only which cannot be used by the users** for preparing their bidding documents. The bidding document may include a purchased copy, the cost of which can be retrieved as part of the selling price of the bidding document. Alternatively, the FIDIC Conditions of Contract can be referred to in the bidding documents, and the bidders are advised to obtain copies directly from FIDIC.\*

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As per rules, Contractor will be required to purchase the documents directly from the FIDIC.

FIDIC Conditions of Contract can be obtained from:

FIDIC Secretariat

P.O. Box 86

1000 Lausanne 12

Switzerland

e-mail: [fidic.pub@fidic.org](mailto:fidic.pub@fidic.org) – [FIDIC.org/book](http://FIDIC.org/book)

## **SPECIFICATIONS**

**(Will be Provided Before Commencement of Work as Part – II)**

# MARKING CRITERIA

## 1. Mandatory criteria (Table -1):

Following mandatory criteria must be met by the bidder in order to qualify for further technical evaluation. In case of failing, the procuring agency reserves the right to cancel the bid

Valid Registration with: 1. PEC 2. SRB 3 FBR	Documentary proof must be accompanied
---	---------------------------------------

## 2. Technical evaluation criteria:

### a) General Experience (Table -2)

Sr. No.	Description	Marks Assigned	Explanation for Marks Obtained
a)	Projects of similar nature and complexity Completed in last <b>five</b> years. (Each of min. <b>Ground +2 -Storeyed</b> Building Work) No Marks are awarded for works less than specified limits.	15	<ul style="list-style-type: none"> <li>12 Marks are given if the contractor has completed at least 3 projects of similar nature in last <b>five</b> years.</li> <li>For less than 3 projects completed use the following weightage. <math>12 \times (A/3)</math></li> <li>For more than 3 projects but less than 6 projects completed use the following weightage. <math>12 + (A/6) \times 3</math> Maximum marks 15 marks A = No of projects of similar nature Completed in last <b>five</b> years</li> <li>Full Marks are given in case of 6 projects or more.</li> </ul>
b)	Projects of similar nature and complexity in-hand during last <b>five</b> years. (Each of min. Ground +2 - Storeyed Building Work) No Marks are awarded for works less than specified limits.	10	<ul style="list-style-type: none"> <li>8 Marks are given if the contractor has 3 projects of similar nature in-hand.</li> <li>For less than 3 projects in-hand use the following weightage. <math>8 \times (A/3)</math></li> <li>For more than 3 projects but less than 6 projects in-hand use the following weightage. <math>8 + (A/6) \times 2</math> Maximum marks 10 (more than 6) A = No of projects of similar nature In-hand during last ten years</li> <li>Full Marks are given in case of 6 projects or more.</li> </ul>
<b>Total Marks Allocated</b>			<b>25</b>

b) Personnel Capabilities (Table -3)

Requirement of Employer/User will be varied from Project to Project. However following factors may be used as a guideline:

Sr. No.	Description	Marks Assigned	Explanation for Marks Obtained
i)	Graduate Engineers registered with Pakistan Engineering Cour	15	<p><b><u>Experience (5-Marks):</u></b></p> <ul style="list-style-type: none"> <li>05 Marks will be given if the individual experience of at least 05 no. of Graduate Engineers registered with (PEC) (professional) is equal to <b>10</b> years or above.</li> <li>For less than 05 no of Graduate Engineers registered with (PEC) having individual experience of 10 years, marks will be given as per following formulas:  <math display="block">= (A/5) * 5</math> A = No. of Engineers having individual experience of 10years or above.</li> </ul> <p><b>Strength of Engineers (10 Marks)</b></p> <ul style="list-style-type: none"> <li>10 Marks will be given if the total no. of Engineers registered with PEC are 10 or above.</li> <li>For less than 10 no of B.Sc Engineers registered with PEC marks will be given as per following formulas:  <math display="block">= (A/10) * 10</math> A = No. of Engineers</li> </ul>

ii)	Associates Engineers (DAE) orskilled labor	10	<p><b>Experience (5-Marks) :</b></p> <ul style="list-style-type: none"> <li>05 Marks will be given if the individual experience of at least <b>05</b> no. of Associates Engineers (DAE) or skilled labor is equal to 05 years or above.</li> <li>For less than <b>05</b> no of Associates Engineers (DAE) or skilled labor having individual experience of <b>05</b> years, marks will be given as per following formulas:  <math display="block">= (A/5) * 5</math> A = No. of Associates Engineers(DAE) or skilled labor</li> </ul> <p><b>Strength of Associate Engineers(5 Marks)</b></p> <ul style="list-style-type: none"> <li>05 Marks will be given if the total no. of Associates Engineers (DAE) or skilled labor are <b>10</b> nos. or above.</li> <li>For less than <b>10</b> no of Associates Engineers (DAE) or skilled labor marks will be given as per following formulas:  <math display="block">= (A/10) * 5</math> A = No. of Associates Engineers (DAE) or skilled labor</li> </ul>
<b>Total Marks Allocated</b>			<b>25</b>

c) Equipment Capability (Table -4)

Critical equipment required for the Project shall be specified by the User/Employer under para 3.2.4 (a). High value equipment should be an option to purchase, lease or hire.

Sr. No.	Description	Marks Assigned	Explanation for Marks Obtained
1	Concrete Mixture.	20	<ul style="list-style-type: none"> <li>No marks if the contractor does not possess any of the equipment listed.</li> <li>05 marks if the Contractor possesses up to 3 equipment listed.</li> <li>08 marks if the Contractor possesses 3 out of 7 equipment listed.</li> <li>12 marks if the Contractor possesses 4 out of 7 equipment listed.</li> <li>16 marks if the Contractor possesses 5 out of 7 equipment listed.</li> <li>20 marks if the Contractor possesses more than 5 equipment listed.</li> </ul>
2	Lift Machine		
3	Compactor (Soil/Road)		
4	Vibrator for Concrete		
5	Form work will all accessories		
6	Level Machine / Total station		
7	Other project related machineries		
<b>Total Marks Allocated</b>			<b>20</b>

d) Financial Soundness (Table -5)

- For Financial Status assessment, the Applicants may be required to submit Audited financial statements for the last five years or any other document which verifies their Financial Status.
- Employer/User may amend para 3.2.5 of Instruction to Applicants in accordance with Project requirements and the minimum essential requirements mentioned in Invitation for Pre- qualifications.

*The following may be used merely as guidelines*

Sr. No.	Description	Marks Assigned	Criteria for Marks Obtained
a)	Available Bank Credit Line	10	<ul style="list-style-type: none"> <li>• 03 Marks are given if the available bank credit line limit is equal to the estimated cost.</li> <li>• 05 Marks are given if the available bank credit line limit is more than estimated cost and less than twice of estimated cost.</li> <li>• 07 Marks are given if the available bank credit line limit is equal to more than twice of estimated cost and less than 500 million PKR.</li> <li>• Full Marks (10) are given in case of limit is 500 million or more.</li> </ul>
b)	Working Capital in last (05) years	10	<ul style="list-style-type: none"> <li>• 05 Marks are given if the available average working capital for last Five years is less than twice of estimated cost.</li> <li>• 07 Marks are given if the available average working capital for last Five years is more than twice of estimated cost and less than 500 million PKR.</li> <li>• Full Marks (10) are given in case working capital is 500 million PKR or more.</li> </ul>
e)	Litigation History in which Decision has been given against the firm(s)	05	<ul style="list-style-type: none"> <li>• In case the firm is involved in any litigation, no marks will be given</li> <li>• 05 points will be added in case affidavit of no litigation is attached.</li> </ul>
f)	Blacklisting from any agency	05	<ul style="list-style-type: none"> <li>• In case the firm is blacklisted, no Marks will be given and 05 points will be added in case affidavit by the company that it has not been black listed is attached.</li> </ul>
<b>Total Marks Allocated</b>			<b>30</b>

## 3.0 Qualification Criteria

### 3.0.1 General

Qualification will be based on all the criteria given in succeeding paras:

3.0.2 to 3.2.6 regarding the Applicant's Financial Soundness, Experience Record, Personnel Capabilities and Equipment Capabilities as demonstrated by the Applicant's responses in the forms attached to this letter. The Employer reserves the right to waive minor deviations if these don't materially affect the capability of an applicant to perform the contract. Sub-contractor's experience and resources shall not be taken into account in determining the Applicant's compliance with the qualifying criteria. However, Joint Venture experience & resources shall be considered. Consortium or Association of firms will be considered for similar treatment as in case of Joint Venture. The procuring agency shall evolve criteria keeping in view the complexity of the Project. A general criteria merely as a model is provided for reference of the drafters of the Prequalification Document as follows (Details are provided in Table -2 to Table-5):

Sr. No.	Category	Weightage/Marks
1.	General Experience	25
2.	Personnel Capabilities	25
3.	Equipment Capabilities	20
4.	Financial Soundness	30
	<b>Total:</b>	<b>100</b>

**Note:** Qualification status shall be decided on the basis of Pass/Fail basis. The applicant must secure at least 50% score in each category, but overall passing percentage should be 60%.

The further detailed criteria for each category may be developed as given under the each head as follows:

### 3.2.2 General Experience

Credit Marks for experience shall be awarded on the basis of following qualifications (Details provided in Table -2):

Sr. No.	Description	Maximum Points
1)	Projects of similar nature and complexity Completed in last five years.	15
2)	Projects of similar nature and complexity in-hand during last five years.	10
	<b>Sub-total:</b>	<b>25</b>

### 3.2.3 *Personnel Capabilities:*

Credit Marks shall be awarded under this category using the following criteria (Details provided in the Table-3):

<b>Sr. No.</b>	<b>Description</b>	<b>Maximum Points</b>
1)	Graduate Engineers registered with Pakistan Engineering Council (PEC)	15
2)	Associates Engineers (DAE) or skilled labor	10
	<b>Sub-total:</b>	<b>25</b>

### 3.2.4 *Equipment Capabilities*

Credit Marks shall be granted on the basis of the following criteria for various kinds of equipment relevant for the Project (Details provided in Table-4):

<b>Sr. No.</b>	<b>Equipment Type and Characteristics</b>	<b>Maximum Marks</b>
1.	Different types of equipment	20
	<b>Sub-total:</b>	<b>20</b>

### 3.2.5 *Financial Position*

Credit Marks shall be awarded on the basis of the following criteria (Details provided in Table-5):

<b>Sr. No.</b>	<b>Description</b>	<b>Maximum Marks</b>
1)	Available Bank Credit Line	10
2)	Working Capital in last(05) years	10
3)	Litigation History in which Decision has been given against the firm(s)	05
4)	Blacklisting from any agency	05
	<b>Sub-total:</b>	<b>30</b>



## 3.1 Joint Venture (JV)

3.1.1. Joint Venture must comply with the following requirements:-

- a) Following are minimum qualification requirements:-
  - i) The lead partner shall meet not less than \_\_\_\_\_/ *Assess and insert a figure which is not less than 40 percent*] percent of all qualifying criteria given in paras 3.2 and 3.5 heretofore.
  - ii) Each of the partners shall meet not less than \_\_\_\_\_/ *Assess and insert a figure which should not be less than 25 percent*] percent of all the qualifying criteria given in paras 3.2 and 3.5 heretofore.
  - iii) The joint venture must collectively satisfy the criteria of paras 3.2, 3.3 and 3.4, for which purpose the relevant figures for each of the partners shall be added together to arrive at the JV's total capacity. Individual members must satisfy each of the requirements of paras 3.5 and 3.6 heretofore.
- b) Any change in a prequalified JV after prequalification, shall be subject to the written approval of the Employer prior to the deadline for submission of bids. Such approval may be denied if:-
  - i) Partner(s) withdraw from a JV and remaining partners do not meet the qualifying requirements;
  - ii) The new partners to a JV are not qualified individually or as another JV; or
  - iii) In the opinion of the Employer, a substantial reduction in competition would result.
- c) Bid shall be signed by all members in the JV so as to legally bind all partners, jointly and severally, and any bid shall be submitted with a copy of the JV agreement providing the joint and several liability with respect to the contract

3.1.2 The prequalification of a JV does not necessarily Qualify any of its partners individually or as a partner in any other JV or association. In case of dissolution of a JV, each one of the constituent firms may Qualify if they meet all the prequalification requirements and any partner of J.V has requested/shall request for the same and then his prequalification shall be subject to the written approval of the Employer.

## 3.4 Conflict of Interest

3.4.1 The Applicant (including all members of a JV) must not be associated, nor have been associated in the past, with the consultant or any other entity that has prepared the design, specifications, and other prequalification and bidding documents for the project, or was proposed as Engineer for the contract, over the last five years. Any such association may result in disqualification of the Applicant.

## 3.5 Updating Prequalification Information

3.5.1 Bidders shall be required to update the financial, personnel and equipment information used for prequalification at the time of submitting their bids, to confirm their continued compliance with the

qualification criteria and verification of the information provided at the time of prequalification. A bid shall be rejected if the Applicant's qualification thresholds are no longer met at the time of bidding.

### 3.6 Other Factors

3.6.1 Only firms and JVs that have been prequalified under this procedure shall be invited to bid. A qualified firm or a member of a qualified JV may participate only in one bid for the contract. If a firm submits more than one bid, singly or as a JV, all bids including that bidder will be rejected. This rule will not apply in respect of bids which include specialist sub-contractors who are used by more than one bidder.

3.6.2 The Employer reserves the right to:-

a) Amend the scope and value of any contract(s) to be bid, in which event the bidder(s) will only bid among those prequalified bidders who meet the requirements of the contract(s) as amended. However the Employer has to review the disqualified bids who originally do not meet the specified criteria for Pre-qualification.

b) Cancel the prequalification process and reject all applications. The Employer shall neither be liable for any such actions nor be under any obligation to inform the Applicant of the grounds for rejection, however, may be debriefed if solicited.

3.6.3 Applicants will be informed in writing by fax or mail within \_\_\_\_\_ [ Number of days to vary between 42-84 days i.e. the time required to complete prequalification process ] days of the date for submission of applications (para 8 of Chapter 2.0, Invitation for Prequalification) of the result of their applications and may be debriefed if solicited.

## Application Form A-2

### General Experience Record

Name of Applicant or partner of a joint venture
---

*All individual firms and all partners of a joint venture are requested to complete the information in this form. The information supplied should be the annual turnover of the Applicant (or each member of a joint venture), in terms of the amounts billed to clients for each year for work in progress or completed over the past five years.*

*Use a separate sheet for each partner of a joint venture.*

<b>Annual Turnover (Construction only)</b>		
<b>Year</b>	<b>Turnover (in actual currency)</b>	<b>Equivalent Rupees in Millions.</b>
1.		
2.		
3.		
4.		
5.		

**Application Form A-3**

**Joint Venture Summary if applicable**

<b>Names of all Partners of a Joint Venture</b>
1. Lead Partner
2. Partner
3. Partner
4. Partner
5. Partner
6. Partner

*Total value of annual construction turnover, in terms of work billed to clients,*

<b>Annual Turnover Data (Construction only; Equivalent in Pak Rupees, Millions)</b>						
<b>Partner</b>	<b>Form A-2 Page No.</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>
1. Lead Partner						
2. Partner						
3. Partner						
4. Partner						
5. Partner						
6. Partner						
<b>Total:</b>						

## **Application Form A-4**

### **Particular Experience Record**

*Name of Applicant or partner of a joint venture*

*To Qualify, the Applicant shall be required to pass the specified requirements applicable to this form, as set out in the : Instructions to Applicants”.*

*On a separate page, using the format of Application Form A-5, each applicant or partner of a Joint Venture is required to list all contracts of a value equivalent to Pak Rs.-(User/Employer to provide the amount) million, of a similar nature and complexity to the contract for which the Applicant wishes to qualify, undertaken during the last five years<sup>1</sup>. The information is to be summarized, using Application Form A-5, for each contract completed or under execution by the Applicant or by each partner of a Joint Venture.*

*Where the Applicant proposes to use named subcontractor(s) for critical components of the works, or for work contents in excess of 10 percent of the value of the whole works, the information in the afore-mentioned forms should also be supplied for each specialist subcontractor.*

*Where applications are being invited for a number of contracts, suitable wording should be introduced, to allow applicants to apply for individual contracts or groups of contracts (slice and package contracts)*

**Application Form A-5**

**Details of Contracts of Similar Nature and Complexity**

*Name of Applicant or partner of a joint venture*

Use a separate sheet for each contract.

1.	Name of Contract
	Country
2.	Name of Employer
3.	Employer Address .....
4.	Nature of works and special features relevant to the contract for which the Applicant wishes to Qualify ..... .....
5.	Contract Role (Tick One) (a) Sole Contractor      (b) Sub- Contractor      (c) Partner in a Joint Venture
6.	Value of the total contract (in specified currencies) at completion, or at date of award for current contract Currency.....                      Currency.....                      Currency.....
7.	Equivalent in Pak/Rs.
8.	Date of Award
9.	Date of Completion
10.	Contract Duration (Years and Months)  ___ Years                      ___ Months
11.	Specified Requirements I ..... ..... .....

*Insert any specific criteria required for particular operations, such as annual volume of earthmoving, underground excavation, or placing concrete etc*

**Application Form A-6**

**Summary Sheet: Current Contract Commitments/Works inProgress**

*Name of Applicant or partner of a joint venture*

*Applicants and each partner to an application should provide information on their current commitments on all contracts that have been awarded, or for which a letter of intent or acceptance has been received, or for contracts approaching completion, but for which substantial Completion Certificate has yet to be issued.*

<b>Name of Contract</b>	<b>Value of Outstanding work (Equivalent Pak Rs. Millions)</b>	<b>Estimated Completion Date</b>
1.		
2.		
3.		
4.		
5.		
6.		

**Application Form A-7**

**Personnel Capabilities**

<i>Name of Applicant</i>
--------------------------

*For specific positions essential to contract implementation, Applicants should provide the names of at least two candidates qualified to meet the specified requirements stated for each position. The data on their experience should be supplied on separate sheets using one Form for each candidate (Application Form A-8).*

1.	Title of Position
	Name of Prime Candidate
	Name of Alternate Candidate
2.	Title of Position
	Name of Prime Candidate
	Name of Alternate Candidate
3.	Title of Position
	Name of Prime Candidate
	Name of Alternate Candidate
4.	Title of Position
	Name of Prime Candidate
	Name of Alternate Candidate



**Application Form A-8**

**Candidate Summary**

<i>Name of Applicant</i>
--------------------------

<b>Position</b>		<b>Candidate</b> [Tick appropriate one] <input type="checkbox"/> Prime <input type="checkbox"/> Alternate
Candidate information	1. Name of Candidate	2. Date of Birth
	3. Professional Qualification	
Present employment	4. Name of employer	
	Address of employer	
	Telephone	Contact (manager/personnel officer)
	Fax	Telex
	Job title of candidate	Years with present employer

*Summarize professional experience over the last 20 years, in reverse chronological order. Indicate particular technical and managerial experience relevant to the Project.*

Month/ Dates/Years		Company / Project / Position / Relevant technical and management experience
From	To	

## Equipment Capabilities

### Application Form A-9

<i>Name of Applicant</i>
--------------------------

*The Applicant shall provide adequate information to demonstrate clearly that he has the capability to meet the requirements for each and all items of equipment listed in the Instructions to Applicants. A separate Form shall be prepared for each item of equipment listed in para 3.2.4 of the Instructions to Applicants, or for alternative equipment proposed by the Applicant.*

<b>Item of Equipment</b>		
Equipment information	1. Name of manufacturer	2. Model and power rating
	3. Capacity	4. Year of manufacture
Current status	5. Current location	
	6. Details of current commitments	
Source	7. Indicate source of the equipment  <input type="checkbox"/> Owned <input type="checkbox"/> Rented <input type="checkbox"/> Leased	

*Omit the following information if it is owned by the Applicant or partner.*

Owner	8. Name of owner	
	9. Address of owner	
	Telephone	Contact name and title
	Fax	Telex
Agreement	Details of rental/lease specific to the Project.	

**Application Form A-10****Financial Capability**

<b>Name of Applicant or Partner of a Joint Venture</b>
--

*Applicants, including each partner of a joint venture, should provide financial information to demonstrate that they meet the requirements stated in the Instructions to Applicants. Each applicant or partner of a joint venture must fill-in this form. If necessary, use separate sheets to provide complete banker information. A copy of the audited balance sheets should be attached.*

<b>Banker</b>	Name of banker	
	Address of banker	
	Telephone	Contact name and title
	Fax	Telex

*Summarize actual assets and liabilities in Pak Rupees (Equivalent at the current rate of exchange at the end of each year) for the previous five years, based upon known commitments, projected assets and liabilities in pak Rupees equivalent for the next two years.*

<b>Financial information in Pak Rs. or equivalent</b>	<b>Actual: previous five year</b>					<b>Projected: next two years</b>	
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
1. Total assets							
2. Current assets							
3. Total liabilities							
4. Current liabilities							
5. Profits before taxes							
6. Profits after taxes							

*Specific proposed sources of financing to meet the cash flow of the Project, net of current commitments (Instructions to Applicants, para 3.2.5).*

<b>Source of financing</b>	<b>Amount (Pak Rs. or equivalent)</b>
1.	
2.	
3.	
4.	

*Attach audited financial statements for the last five years (for individual applicant or each partner of joint venture).*

*Firms owned by individuals, and partnerships, may submit their balance sheets certified by a registered accountant, and supported by copies of tax returns, if audits are not required by the laws of their countries of origin in case of foreign firms.*



## Bill of Quantities

Note:

*“All notifications issued by the Government of Sindh regarding difference of cost of material will be implemented in this tender”.*

**Software Engineering 'Department**  
**QUEST, NAWABSHAH**  
**SUMMARY OF COST - CIVIL WORKS**

S.#	Description	Amount (Rs.)	
<b>A</b>	<b>Up to Plinth Level</b>		
1	Schedule Civil Works except steel	Rs.	
2	Schedule Civil Works Steel	Rs.	
	<b>Total - A</b>	Rs.	
<b>B</b>	<b>Above Plinth Level</b>		
1	Schedule Civil Works except steel	Rs.	
2	Schedule Civil Works steel	Rs.	
3	Schedule Archi-works	Rs.	
4	Non schedule Archi-Works	Rs.	
	<b>Total - B</b>	Rs.	
<b>C</b>	<b>Plumbing Works</b>		
1	Schedule Plumbing Works Internal	Rs.	
2	Plumbing Works Non Schedule Item Internal	Rs.	
	<b>Total - C</b>	Rs.	
	<b>Total-A+B+C</b>	Rs.	
<b>D</b>	<b>Over Head Tank</b>		
1	Structure works without Steel	Rs.	
2	Structure works with Steel	Rs.	
3	Non Schedule item	Rs.	
	<b>Total - D</b>	Rs.	
<b>E</b>	<b>External Works</b>		
1	Schedule Civil Works except steel	Rs.	
2	Schedule Civil Works steel	Rs.	
3	External Plumbing Schedule Works	Rs.	
4	External Plumbing Non Schedule Works	Rs.	
	<b>Total: - E</b>	Rs.	
	<b>Grand Total(A+B+C+D+E)</b>	Rs.	

\_\_\_\_\_  
Client

\_\_\_\_\_  
Contractor

## Priced Bill of Quantities

<b>Client:</b>	QUAID-E-AWAM UNIVERSITY OF ENGINEERING SCIENCE AND TECHNOLOGY NAWABSHAH, SINDH	<b>Job No.</b>	PR 1275	<b>Revision Date :</b>	
<b>Project:</b>	SOFTWARE ENGINEERING DEPARTMENT	<b>Prepd. By</b>			
<b>Consult:</b>	Naqvi & Siddiquie, Islamabad	<b>Chkd. By</b>		<b>Date:</b>	

### SUB-STRUCTURE WORK

S.No	DESCRIPTION	UNIT	QTY.	RATE(RS)	AMOUNT(RS)
<b>Item-01</b>	<b><u>JUNGLE CLEARANCE</u></b> Jungle clearance and removing within 100 feet <b>Item 4(a) Page-95</b>	%0Sft	77,000.00	151.25	11,646.25
<b>Item-02</b>	<b><u>EXCAVATION FOR FOUNDATION</u></b> Excavation in foundation of Building Bridges and other structure including dagbelling dressing, refilling around structure. a) In Ordinary soil <b>Chapter No. 01, Item 18(b) Page-4</b> b) In hard soil or soft murum <b>Chapter No. 01, Item 18(c) Page-4</b>	%0cft	23,757.50	3,176.25	75,459.76
		%0cft	23,757.50	3,554.38	84,443.18
<b>Item-03</b>	<b><u>EARTH FILLING</u></b> Filling, watering and ramming earth in under floor with surplus earth from foundation etc. lead upto one chain and lift upto 5 ft. a) Under Floor <b>Chapter No. 01, Item 21 Page-4</b> Filling, watering and ramming earth in under floor with surplus earth from from outside source. b) Under floor <b>Chapter No. 01, Item 22 Page-4</b>	%0cft	22,625.00	1,512.50	34,220.31
		%0cft	68,832.00	3,630.00	249,860.16
<b>Item-04</b>	<b><u>CRUSHED STONE</u></b> Dry rammed brick or stone bllast 1½" to 2" gauge. i) Under Footing ii) Under floor <b>Chapter No. 04, Item (2) Page-15</b>	%cft	4,676.00	3,327.50	155,593.90
		%cft	5,838.00	3,327.50	194,259.45
<b>Item-05</b>	<b><u>P.C.C ( 1:4:8 )</u></b> Cement concrete plain (1:4:8) using sulphate resistant cement type (v) including placing, compacting, finishing, curing, complete, (Including screening and washing of stone aggregate without shuttering). i) Footing ii) Floor <b>Chapter No. 04, Item 5(i) Page-16</b>	%cft	4,676.00	11,288.75	527,861.95
		%cft	4,423.00	11,288.75	499,301.41
<b>Item-06</b>	<b><u>P.C.C ( 1:2:4 )</u></b> Cement concrete plain (1:2:4) using sulphate resistant cement type (v) including placing, compacting, finishing, curing, complete, (Including screening and washing of stone aggregate without shuttering). i) Floor <b>Chapter No. 04, Item 5(f) Page-16</b>	%cft	4,423.00	14,429.25	638,205.73



S.No	DESCRIPTION	UNIT	QTY.	RATE(RS)	AMOUNT(RS)
<b>Item-07</b>	<b><u>REINFORCED CEMENT CONCRETE (S.R Cement)</u></b> Reinforced cement concrete ( 1:2:4 ) using sulphate resistant cement type (v) or more rich to provide 6"x12" cylinder strength of 3000 psi at 28 days age (equivalent cube strength = 3750 psi) including all labour and material except the cost of steel reinforcement and its labour for bending and binding which will be paid separately. This rate also includes all kinds of forms, moulds, lifting, shuttering, curing, rendering and finishing exposed surface including screening and washing of stone aggregate.				
	i) Footing	cft	8,947.00	337.00	3,015,139.00
	ii) Tie Beams	cft	3,201.00	337.00	1,078,737.00
	<b>Chapter No. 04, Item 6(a)(I) Page-17</b>				
<b>Item-08</b>	<b><u>CEMENT PLASTER UPTO PLINTH</u></b> Cement plaster 1:4 using sulphate resistant cement				
	i) ½" thick	%sft	2,520.00	2,283.93	57,555.04
	<b>Chapter No. 09, Item 11(b) Page-52</b>				
<b>Item-09</b>	<b><u>BRICK MASONRY IN FOUNDATION &amp; PLINTH (1:6)</u></b> Pacca brick work in foundation & plinth in cement sand mortar 1:6 using sulphate resistant cement type (v) .				
		% cft	10,767.00	11,948.36	1,286,479.92
	<b>Chapter No. 05, Item 4(e) Page-21</b>				
<b>Item-10</b>	<b><u>DAMP PROOF COURSE (2" thick) (S.R Cement)</u></b> Damp proof course with cement sand & shingle/crush concrete (1:2:4) using sulphate resistant cement type (v) including 2 coats of asphaltic mixture. (Over Walls)				
		%sft	1,444.00	3,912.85	56,501.55
	<b>Chapter No. 04, Item 29(b) Page-19</b>				
<b>Item-11</b>	<b><u>POLYTHENE SHEET</u></b> Providing and laying single per layer of polythene sheet 0.13 mm thick for water proofing as per specification and instructions of Engineer Incharge.				
	(Over Walls)				
	a) Over walls	sft	3,964.00	10.70	42,414.80
	b) Under floor	sft	17,690.00	10.70	189,283.00
	<b>Chapter No. 07, Item 38 Page-38</b>				
<b>Item-12</b>	<b><u>BITUMEN PAINTING</u></b> Two coats of bitumen laid hot using 34 lbs for % sft. Over exposed surface of concrete and Brick work in foundation and plinth and blinded with sand at one Cft.per sft				
		%sft	2,520.00	1,887.40	47,562.48
	<b>Chapter No. 07, Item 13 Page-35</b>				

S.No	DESCRIPTION	UNIT	QTY.	RATE(RS)	AMOUNT(RS)
Item-13	<b>REINFORCED CEMENT CONCRETE (S.R Cement)</b>				
	Reinforced cement concrete (1:1½:3 ) using sulphate resistant cement type (v) or more rich to provide 6"x12" cylinder strength of 4000 psi at 28 days age (equivalent cube strength = 4500 psi) including all labour and material except the cost of steel reinforcement and its labour for bending and binding which will be paid separately. This rate also includes all kinds of forms, moulds, lifting, shuttering, curing, rendering and finishing exposed surface including screening and washing of stone aggregate. (Ratio (1:1-1/2:3)				
	i) Columns upto plinth	cft	3,540.00	349.00	1,235,460.00
	ii) Shear wall upto plinth	cft	1,550.00	349.00	540,950.00
	iii) Lift wall upto plinth	cft	182.00	349.00	63,518.00
	<b>Chapter No. 04, Item 6(a)(II) Page-17</b>				
<b>COST WITHOUT STEEL</b>					<b>10,084,452.90</b>
PERMIUM _____ % ABOVE OR BELOW					
<b>(A)-TOTAL COST WITHOUT STEEL</b>					
Item-14	<b>STEEL REINFORCEMENT</b>				
	a)Fabrication of mild steel reinforcement for cement concrete including cutting, bending, laying in position, making joints fastenings, including cost of binding wire also includes removal of rust from bars. a) Grade- 60	Cwt	917.68	5,001.70	4,589,960.06
	<b>Chapter No. 04, Item 8(a) page-17</b>				
<b>COST FOR STEEL</b>					<b>4,589,960.06</b>
PERMIUM _____ % ABOVE OR BELOW					
<b>(B)-TOTAL COST FOR STEEL</b>					

## Priced Bill of Quantities

<b>Client:</b>	QUAID-E-AWAM UNIVERSITY OF ENGINEERING SCIENCE AND TECHNOLOGY NAWABSHAH, SINDH	<b>Job No.</b>	PR 1276	<b>Revision Date :</b>	
<b>Project:</b>	SOFTWARE ENGINEERING DEPARTMENT	<b>Prepd. By</b>			
<b>Consult:</b>	Naqvi & Siddiquie, Islamabad	<b>Chkd. By</b>		<b>Date:</b>	

### SUPER-STRUCTURE WORK

S.No	DESCRIPTION	UNIT	QTY.	RATE	AMOUNT(RS)	
<b>Item-01</b>	<b>REINFORCED CEMENT CONCRETE (S.R Cement)</b> Reinforced cement concrete (1:1½:3 ) using sulphate resistant cement type (v) or more rich to provide 6"x12" cylinder strength of 4000 psi at 28 days age (equivalent cube strength = 4500 psi) including all labour and material except the cost of steel reinforcement and its labour for bending and binding which will be paid separately. This rate also includes all kinds of forms, moulds, lifting, shuttering, curing, rendering and finishing exposed surface including screening and washing of stone aggregate.					
	<b>COLUMNS</b>					
	i) Ground Floor	per cft	3,775	349	1,317,475.00	
	ii) First Floor	per cft	3,775	361.1	1,363,152.50	
	iii) Mumty	per cft	59	373.2	22,018.80	
	<b>Chapter No. 04, Item 6(a)(II)+6(d), Page-17</b>					
	<b>SHEAR WALL</b>					
	i) Ground Floor	per cft	2,011	349	701,839.00	
	ii) First Floor	per cft	2,011	361.1	726,172.10	
	<b>Chapter No. 04, Item 6(a)(II)+6(d), Page-17</b>					
<b>LIFT WALL</b>						
i) Ground Floor	per cft	236	349	82,364.00		
ii) First Floor	per cft	236	361.1	85,219.60		
<b>Chapter No. 04, Item 6(a)(II)+6(d), Page-17</b>						
<b>Item-02</b>	<b>REINFORCED CEMENT CONCRETE</b> Reinforced cement concrete ( 1:2:4 ) or more rich to provide 6"x12" cylinder strength of 3000 psi at 28 days age (equivalent cube strength = 3750 psi) including all labour and material except the cost of steel reinforcement and its labour for bending and binding which will be paid separately. This rate also includes all kinds of forms, moulds, lifting, shuttering, curing, rendering and finishing exposed surface including screening and washing of stone aggregate.					
	<b>BEAMS</b>					
	i) Ground Floor	per cft	4,199	337	1,415,063.00	
	ii) First Floor	per cft	4,476	349.1	1,562,571.60	
	iii) Second Floor (Mumty)	per cft	113	361.2	40,815.60	
	<b>Chapter No. 04, Item 6(a)(I)+6(d), Page-17</b>					
	<b>SLABS</b>					
	i) Ground Floor	per cft	9,522	337	3,208,914.00	
	ii) First Floor	per cft	9,830	349.1	3,431,653.00	
	iii) Second Floor (Mumty)	per cft	160	361.2	57,792.00	
<b>Chapter No. 04, Item 6(a)(I)+6(d), Page-17</b>						

S.No	DESCRIPTION	UNIT	QTY.	RATE	AMOUNT(RS)
	<b>STAIRS</b>				
	i) Ground Floor	per cft	370	337	124,690.00
	ii) First Floor	per cft	108	349.1	37,702.80
	<b>Chapter No. 04, Item 6(a)(I)+6(d), Page-17</b>				
	<b>LINTELS</b>				
	i) Ground Floor	per cft	261	337	87,957.00
	ii) First Floor	per cft	261	349.1	91,115.10
	iii) Second Floor (Mumty)	per cft	13	361.2	4,695.60
	<b>Chapter No. 04, Item 6(a)(I)+6(d), Page-17</b>				
	<b>Railing</b>				
	i) Ground Floor	per cft	626	337	210,962.00
	ii) First Floor	per cft	595	349.1	207,714.50
	iii) Second Floor	per cft	25	361.2	9,030.00
	<b>Chapter No. 04, Item 6(a)(I)+6(d), Page-17</b>				
	<b>PARAPET</b>				
	iii) Second Floor	per cft	1,456	361.20	525,907.20
	<b>Chapter No. 04, Item 6(a)(I)+6(d), Page-17</b>				
	<b>R.C.C Coping</b>				
	i) Ground Floor	per cft	84	337	28,308.00
	ii) First Floor	per cft	80	349.10	27,928.00
	iii) Second Floor	per cft	264	361.20	95,356.80
	<b>Chapter No. 04, Item 6(a)(I)+6(d), Page-17</b>				
	<b>COST WITHOUT STEEL</b>				<b>15,466,417.20</b>
	<b>PERMIUM _____% ABOVE OR BELOW</b>				
	<b>(A)-TOTAL COST WITHOUT STEEL</b>				
<b>Item-03</b>	<b><u>STEEL REINFORCEMENT</u></b>				
	a) Fabrication of mild steel reinforcement for cement concrete including cutting, bending, laying in position, making joints fastenings, including cost of binding wire also includes removal of rust from bars.				
	a) Grade- 60				
	i) Ground Floor	per Cwt	1,790.00	5001.7	8,953,043.00
	ii) First Floor	per Cwt	1,902.00	5152.95	9,800,910.90
	iii) Second Floor	per Cwt	51.18	5304.2	271,468.96
	<b>Chapter No. 04, Item 8(a) &amp; (b) page-19</b>				
	<b>COST FOR STEEL</b>				<b>19,025,422.86</b>
	<b>PERMIUM _____% ABOVE OR BELOW</b>				
	<b>(B)-TOTAL COST FOR STEEL</b>				

Priced Bill of Quantities					
<b>Client:</b>	QUAID-E-AWAM UNIVERSITY OF ENGINEERING SCIENCE AND TECHNOLOGY NAWABSHAH, SINDH	<b>Job No.</b>			
<b>Project:</b>	Software Engineering Department	<b>Prepd. By</b>		<b>Revision Date :</b>	
<b>Consult:</b>	Naqvi & Siddiquie, Islamabad	<b>Checked. By</b>		<b>Date:</b>	
Schedule Archi-works					
S.No.	DESCRIPTION	UNIT	QTY.	RATE	AMOUNT (Rs.)
<b>Item-1</b>	<b>Brick Masonry works in super structure (above plinth level/Plinth protection) Chapter No.5, Page No. 21</b> Providing and laying approved first class burnt brick masonry in super structure walls at any height and any floor, laid and jointed with cement and approved source sand machine mixed mortar, masonry to be laid in course true to line, level and plumbing, protected and properly cured including scaffolding and providing deep joints to receive rendering. All work to be completed as per drawings and specifications, including P/F specified anchorage with concrete members and directed by the Engineer. <b>i) (Item No. 5, (i e) &amp; 6 (where required)</b> 4 1/2" thick and above internal/external walls in (1:4) CSM <b>i) Ground Floor</b>	%cft.	889.33	13,227.41	117,635.74
	<b>ii) First Floor</b>	%cft.	839.53	13,666.04	114,730.40
	<b>iii) Mumty Floor</b>	%cft.	1,454.06	14,290.79	207,796.70
	9" thick and above internal/external walls in (1:6) CSM <b>i) Ground Floor</b>	%cft.	12,624.99	12,674.36	1,600,136.24
	<b>ii) First Floor</b>	%cft.	9,049.61	13,112.99	1,186,675.08
	<b>iii) Mumty Floor</b>	%cft.	344.25	14,262.49	49,098.62
<b>Item-2</b>	(First class brick)walling laid in 1:3 cement sand mortar reinforced with 1" 25 mm wide 18 gauge hoop iron: <b>(Chapter No. 5, Item No. 20 (II), Page No. 25)</b> <b>(II) 4 1/2" (114 mm)thick walling with</b>				
	hoop iron bonding 12" ( 300 mm) apart.	%sft.	1,794.80	5,840.16	104,818.91
<b>Item-3</b>	Cement pointing struck joints on walls. <b>(Chapter No. 9, Items No. 19 (a), Page No. 53)</b> <b>(a) Ratio 1:2</b>	%sft.	1,794.80	1,287.44	23,106.91

S.No.	DESCRIPTION	UNIT	QTY.	RATE	AMOUNT (Rs.)
<b>Item-4</b>	<b>Plain Cement Sand Plastering, Chapter No.9, Page 52</b> Providing and applying 3/4" thick plaster at any floor or at any height using approved quality sand preferably machine mixed mortar, including all bends, corners, recesses including scaffolding and hacking the concrete surfaces, arching the masonry joints and providing 8" wide GI wire mesh of 17 SWG 1"x1" size fixed with GI staples on masonry joints, concrete joints. All plaster to be finishes smooth with steel float in true to level, line and plumb and properly cured, complete as per drawings, specifications and as directed by the Engineer. <b>i) Item No. 11 c + Item No. 29 Page 54</b> Internal walls/columns plaster 3/4" thick in 1:4 CSM <b>i) Ground Floor</b> <b>ii) First Floor</b> <b>iii) Mumty Floor</b> <b>ii) Item No. 11 (c)</b> External Surfaces 3/4" thick 1:4 CSM on walls / up stand / down stand beam projection/jali/RCC Railing. <b>i) Ground Floor</b> <b>ii) First Floor</b> <b>iii) Mumty Floor</b>				
		%sft.	41,593.02	3,015.76	1,254,345.66
		%sft.	36,340.36	3,156.73	1,147,167.20
		%sft.	1,876.97	3,438.67	64,542.89
		%sft.	13,610.41	3,015.76	410,457.36
		%sft.	13,944.80	3,156.73	440,199.69
		%sft.	8,691.53	3,438.67	298,873.03
<b>Item-5</b>	<b>Chapter 9, Page 55, Item 36-A</b> Preparing the surface and painting with matt finish I/c rubbing the surface with Bathy (silicon carbide rubbing brick) filling the voids with zink/chalk / plaster of paris mixture, applying first coat premix, making the surface smooth and then etc: complete.(new surface). <b>a) Walls</b> <b>b) Ceiling</b>				
		%sft.	79,810.36	1,989.62	1,587,922.84
		%sft.	30,852.26	1,989.62	613,842.81
<b>Item-6</b>	<b>Chapter 9, Page 56, Item 38 (a+b) &amp; Item 42</b> Prepairing the surface and painting with weather coat I/c rubbing the surface with rubbing bricks / sand Paper, filling the voids with chalk / plaster of Paris and then painting with weather coat of approved make + 2nd & subsequent coat. Extra Labour for above 20'. <b>a) Plaster surface external</b> <b>Ground Floor</b> <b>First Floor</b> <b>Mumty Floor</b>				
		%sft.	13,610.41	1,948.10	265,144.44
		%sft.	13,944.80	2,176.19	303,465.34
		%sft.	8,691.53	2,405.09	209,039.12
<b>Item-7</b>	<b>Polythene Sheet</b> Providing & laying single per layer of polythene sheet 0.13mm thick for water proffing as per specification and instructions of Engineer incharge. Two layers <b>a) Under Floor - Plinth Level</b>				
		sft.	2,059.33	21.40	44,069.62
<b>Item-8</b>	<b>Chapter No.7, Page 38, Item No.38</b> <b>Enamel Paint</b> <b>Painting New Surfaces</b> Prepairing surface and painting of doors and windows any type, (including Edges). Priming Coat + Each subsequent coat of paint. <b>Chapter No.11, Page 70, Item No.5 c i. &amp; ii</b>				
		%sft.	2,237.78	1,498.68	33,537.09
<b>Item-9</b>	Providing and laying 1" thick topping cement concrete (1:2:4) inculding surface finish and diving into panels with Anti slip finsihing. <b>Chapter No. 8 Page 42, Item No. 16 ( d )</b>				
		%sft.	98.78	4,411.82	4,358.00

S.No.	DESCRIPTION	UNIT	QTY.	RATE	AMOUNT (Rs.)
<b>Item-10</b>	<b>MARBLE TILES - SKIRTING</b> Providing and fixing 3/8" thick marble tiles of approved quality and colour and shade size 8" x 4" /6" x 4" in dado skirting and facing removal /tucking of existing plaster surface etc. Over 1/2" thick base of cement mortar 1:3 setting of tiles in slurry of white cement over mortar base including filling the joints and washing the tiles with white cement slurry , curring finishing, cleaning and polishing etc. complete. <b>All Floors</b> <b>Chapter No. 8 Page 49, Item No. 68 (i)</b>	Sft.	1,824.45	186.04	339,419.77
<b>Item-11</b>	<b>Khuras on roof 2'x2'x4" (Chapter No. 7, Item No. 18, Page No. 36)</b>	Each	10.00	358.68	3,586.80
<b>Item-12</b>	Levelling dressing and making lawns.( <b>Chapter No. 18, Item No. 42, Page 103)</b>	%sft	1,344.63	181.50	2,440.50
<b>Item-13</b>	Supplying Manure. ( <b>Chapter No.18, Item No. 44, Page 104)</b>	P.Cart load	10.00	298.12	2,981.20
	<b>(A)-TOTAL COST WITHOUT STEEL</b>				<b>10,429,391.96</b>
	<b>PERMIUM_____ % ABOVE OR BELOW</b>				
	<b>A- Total</b>				

S.No.	DESCRIPTION	UNIT	QTY.	RATE	AMOUNT (Rs.)
Item-14	<b>Aluminum Doors/Windows/Ventilators, Chapter No. 18, Page 84, Item No. 84 (b)</b> Supplying & fixing in position 2mm Aluminium channels framing for slidding windows & ventilators of Alcop made with 5 mm thick tinted glass glazing (Belgium) & Aluminium fly screen I/c handles stoppers & locking arrangement etc.Complete. <b>i) Deluxe model (Bronze)</b>	sft.	3,407.45	1,647.69	5,614,421.29
Item-15	<b>Aluminum Doors/Windows/Ventilators, Chapter No. 18, Page 83, Item No. 83 (b)</b> Supplying & fixing in position Aluminium channels framing for hinged doors or Alcop made with 5 mm thick tinted glass glazing (Belgium) and Alpha (Japan) locks I/c handles, stoppers etc.	sft.	240.00	1,507.66	361,838.40
Item-16	<b>Glazed Tiles Dado Chapter No.8, Page 45, Item No. 38</b> White glazed tiles 1/4" thick dado jointed in white cement and laid over 1:2 cement sand mortar 3/4" thick including finishing. (18' X 36') <b>i) Kitchen</b>	%sft.	8,460.13	28,299.30	2,394,156.58
Item-17	<b>Wooden Architrave</b> Providing and fixing with sunk iron screws wooden Architrave approved design / shape having width not less than 2½ inches as directed by Engineer Incharge. <b>Chapter No.10, Page 66, Item No.60</b>	rft.	846.00	49.97	42,274.62
Item-18	<b>(Chapter No.8, Page 43, Item No. 25)</b> laying floors of approved coloured glazed tiles 1/4" thick laid in white cement and pigment on a bed of 3/4" thick cement mortar 1:2. <b>(F-5 12" x 18")</b> <b>i) All Levels</b>	%sft.	2,059.33	27,747.06	571,402.98
Item-19	<b>Wood work Chapter No.10, Page 58, Item No. 9</b> <b>Wooden Doors Inculding Frames</b> Providing and Fixing in position doors, windows and ventilators of first class deodar wood frames and 1-3/4" thick commercial, ply veneer shutters of first class deodar skeleton (Hollow) and commercial ply wood (3 ply) on both sides including hold fasts, hinges, iron tower bolts, handles and cleats with cord and one mortice lock and hooks. <b>(All Room Doors)</b>	sft.	1,468.00	1,227.36	1,801,764.48
Item-20	<b>Wood work Chapter No.10, Page 59, Item No. 13</b> Deodar wood frame with braces and 22 guage G.I sheet facing on one side inculding hold fast wooden beadings, hinges, and locking arraangement as directed by Engineer-Incharge. <b>(Toilet Doors)</b>	sft.	700.50	655.55	459,212.78
<b>B- TOTAL FOR SCHEDULE ITEMS</b>					<b>11,265,446.62</b>
<b>PERMIUM _____% ABOVE OR BELOW</b>					
<b>B- TOTAL FOR SCHEDULE ITEMS</b>					
<b>GRAND TOTAL FOR SCHEDULE ITEMS</b>					



Priced Bill of Quantities					
<b>Client:</b>	<b>QUEST NAWABSHAH, SINDH</b>	<b>Job No.</b>		<b>Revision Date</b>	
<b>Project:</b>	<b>Software Engineering Department</b>	<b>Prepd. By</b>		<b>:</b>	
<b>Consult:</b>	<b>Naqvi &amp; Siddiquie, Islamabad</b>	<b>Chkd. By</b>		<b>Date:</b>	
Non - Schedule Archi-works					
S.No.	DESCRIPTION	UNIT	QTY.	RATE	AMOUNT (Rs.)
<b>Item-1</b>	<b><u>PORCELAIN FLOOR TILE:</u></b> Providing and laying polished/matt finish Porcelain tile in size Upto 6 to 8 Sqft of the area approved make, colour, and shade with patches/borders pattern in dark color, laid on cement paste having addition of tile bond at 15% by weight of cement laid over 1" thick 1:4 cement sand base mortar, over existing PCC 1:2:4 complete as per detail shown on the drawing, specifications, and as directed by the Engineer. (Floor Type as per dwg)				
	<b>i) Ground Floor Room's, Hall's, Lab's &amp; Passage</b>	Sft	16,007		
	<b>ii) First Floor Room's, Hall's, Lab's &amp; Passage</b>	Sft	15,730		
	<b>iii) Mumty</b>	Sft	51		
<b>Item-2</b>	<b><u>INSULATION BOARD:</u></b> Providing and laying moulded 2" thick Styropax (Firerated) Insulation Boards of approved colour, type having 35Kg/Cu.M density individually moulded, complete as per drawings, specifications and as directed by the Engineer:				
	<b>a) for Roof (2" Thick)</b>	Sft.	18,423		
	<b>b) for O.H.Water tenk (1-1/2" thick)</b>	Sft.	1,566		
<b>Item-3</b>	<b><u>ROOF SCREEDING:</u></b> Providing and laying average 3" thick roof screeding in single layer having slope towards roof drain and making panels of 30 Sft size with 3/4"x3/4" thick grove filled with sand and bitumen, laying R.C.C. (1:2:4), using lawrancepur sand and margalla crushed stone aggregates, including the cost of 4"x4" size 10 SWG steel wire welded mesh reinforcement placed in middle of the thickness including curing, overlap of mesh etc., complete as per drawings, specifications and as directed by the Engineer: On Top Roof				
	<b>i) Main Roof and Mumty Roof</b>	Sft	18,423		
<b>Item-4</b>	<b><u>WATER PROOF PLASTERING:</u></b> Providing and laying 3/4" thick (1:3) cement sand plaster mixed with sika, imporient or equivalent waterproofing compound material @ 3% of binder content by weight and 2 coats of primer of Sika bond LA/Latex and 2 coats of seal top by Sika 105 over plaster. Keeping the walls and bottom slab properly wet, including all bends, corners, recesses and also including hacking the concrete surfaces, all plaster to be finished smooth with steel float in true level, line and properly cured, complete as per drawings, manufacturer's specifications and as directed by the Engineer.				
	<b>a) Overhead Water Tank//lift where required</b>	Sft	1,566		
<b>Item-5</b>	<b><u>WATER PROOFING:</u></b> Providing, laying and applying 4mm thick Plasto Grip (Roof Grip water proofing bituminous membrane torch applied polymerized containing non woven polyester coated on both side with APP modified bitumen compound having upper and lower surface with polyethylene film and applying Roof Grip Primer @ 3 to 4 Sq.M per liter on RCC surface roof and unrolling, including overtop age 10cm at side and 15cm at ends. Complete as per manufacturer's specification and instructions of the Engineer.				
	<b>a) Roof &amp; Mumty</b>	Sft	18,423		
	<b>b) Bathrooms</b>	Sft	2,251		

S.No.	DESCRIPTION	UNIT	QTY.	RATE	AMOUNT (Rs.)
Item-6	<p><b>MARBLE TILES</b>  Providing and laying 3/4" thick Sado Grey Granite pre-polished marble as per detail shown on the drawings on Stair steps including landing and risers set over and including average 1-3/4" thick (1:3)CSM with cement slurry and grouting the joint with neat white cement mixed with colour pigment to match the marble colour including curing, grinding and chemical polishing, two strips Non skid tape 1" wide of 3M on treads etc., complete as per specifications, drawings and as directed by the Engineer. The basic rate of marble slabs 3/4" thick supplied at site should be taken Rs.150/- per sft.</p> <p><b>a) Stairs/Steps: Stair upto Mumty</b>  <b>i) On Treads with bull nosing 3/4" thick full length</b>  <b>ii) Risers</b>  <b>iii) Stair Landing</b>  <b>iv) Skirting</b>  <b>b) Marble on Ablution</b>  <b>c) MARBLE IN ENTRANCE</b></p>				
		Sft.	620		
		Sft.	331		
		Sft.	160		
		Sft.	122		
		Sft.	204		
		Sft.	215		
Item-7	<p><b>Marble on Counters</b>  Providing and Laying Sunny White Marble 3/4" thick on counters of approved shape and colour of best Quality. Complete as directed by the Engineer.</p>	Sft	86		
Item-8	<p><b>Kitchen Cabinets</b>  Providing &amp; fixing factory made Kitchen Cabinet on frame and pedestals of kitchen care or Interwood supplier with solid mahogany wood panel shutters, self closing s.s carriage drawers and laminated wooden shelves and partitions including hardware and lacquare polishing etc.</p>	Sft	86		
Item-9	<p><b>Polystyrene sheet</b>  Providing 1-1/2" thick polystyrene sheet having 35 kg density per cubic meter sheets placed abutting with each other in the external wall cavity by pressing in the triangular tiles etc complete as directed by Engineer.</p>	Sft	4,976		
Item-10	<p><b>VANITY MARBLE TOP:</b>  Providing and fixing 1" thick factory grinded and polished approved colour Best Quality Marble White for top and face of vanity having 2'-0" width and length as shown on the drawings with 1/2" thick 1:2 cements and base mortar including 3" thick R.C.C 1:2:4 shelve with 12" deep drop pardi and cement sand plaster at bottom of the shelve, including making opening in slab and vanity top, rounding/bull nosing and polish of edges including epoxy jointing and silicon filling at wall and marble slab or fixture joints and enamel painting at plastered surfaces etc, complete as per drawings and as directed by the Engineer.</p>	Sft	487		
Item-11	<p><b>False Ceiling</b>  Providing and fixing false ceiling laminated panels of approved pattern 600mm x 600mm x 7.5mm thick including Aluminium Tee and Aluminium angel 25mmx25mmx1mm, including suspension system consisting of G.I adjustable hangers of 8 SWG, stiffeners, expansion bolts &amp; Clips including provision of lights, A. C. Grills, fire alarm detectors, fire sprinklers, filling the joints with antibacterial sealant, Complete as per drawings, specifications and as directed by the Engineer, in area as shown on the drawings.</p> <p><b>a) Chairman Room &amp; Admin Staff &amp; Toilet</b></p>	Sft	185		
				<b>Total Rs:</b>	

## Priced Bill of Quantities

S.No	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
<b>PLUMBING</b>					
<b>1</b>	<p><b><u>ORISA TYPE W.C.PLASTIC FLUSHING CISTERN 3 GALLONS WITH 4" EARTHEN WARE TRAP &amp; PLASTIC THUMBLE</u></b></p> <p>Providing and fixing orisa type white or colour glazed earthen ware w.c pan with cost of low level plastic flush tank of 3 gallons capacity of approved quality i/c making requisite number of holes in wall, plinth &amp; floor and making good in cement concrete 1:2:4.with 4" dia earthen ware trap and plastic thumble.</p> <p style="text-align: center;"><b>Chapter-1,item-3A(ii),Page-2</b></p>	Each	15	6,166.60	92,499
<b>2</b>	<p><b><u>EUROPEAN TYPE W.C</u></b></p> <p>Providing and fixing European white glazed earthen ware wash down w.c pan complete with and I/c the cost of white/black plastic seat (Best Quality ) and lid with C.P brass hinges and buffer, 3 gallons white glazed earthen ware low level flushing cistern with siphon fitting 1-½" dia white porcelain enamelled flush bend ¾" dia and making requisite number of holes in walls, plinth and floor for Pipe connections and making good in cement concrete 1:2:4 (Foreign Quality) ( ICL or equivalent )</p> <p style="text-align: center;"><b>Chapter-1,item-5,Page-2</b></p>	Each	13	11,477.40	149,206
<b>3</b>	<p><b><u>LAVATORY BASIN</u></b></p> <p><b>a) Basin</b></p> <p>Providing and fixing 24" x 18" lavatory basin in white glazed earthen ware complete with &amp; I/c the cost of W.I or C.I cantilever brackets 6 inches built into wall, painted white in two coats after a primary coats of red lead paint a pair of ½" dia rubber plug &amp; chrome plated brass chain 1-¼" dia, malleable iron or brass unions and making requisite number of holes in walls, plinth and floor for Pipe connections and making good in cement concrete 1:2:4. (Foreign or Equivalent...)</p> <p style="text-align: center;"><b>b) Pedestal</b></p> <p>Add extra for providing &amp; fixing of earth ware pedestal white or coloured Glazed ( Foreign or equivalent )</p> <p style="text-align: center;"><b>Chapter-1,item-(10,11),Page-3</b></p>	Each	5	4,928.00	24,640
		Each	5	2,533.47	12,667

S.No	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
4	<b><u>FLOOR TRAP</u></b> Providing and fixing 6"x2" or 6"x3" C.I. floor trap of the approved self cleaning design with a C.I. screwed down grating with or without a vent arm including cost of making requisite number of holes in walls, plinth & floor for pipe connection & making good in cement concrete 1:2::4.	Each	73	2,024.43	147,783
	<b>Chapter-1,item-20,Page-6</b>				
5	<b><u>NYLON CONNECTIONS WITH BRASS STOP COCK</u></b> Providing and fixing in position nylon connection complete with " dia brass stop cock with pair of brass nuts and lining jointed to nylon connection.	Each	114	447.15	50,975
	<b>Chapter-1,item-23,Page-6</b>				
6	<b><u>TOWEL RAIL 30" LONG</u></b> ¾" dia round or square (Superior quality)	Each	21	1,269.95	26,669
	<b>Chapter-2,item-1(II)b,Page-6</b>				
7	<b><u>BRASS TOILET C.P PAPER HOLDER</u></b> Providing and fixing C.P. brass toilet paper brackets complete (similar) to twyford design number 1108 Superior Quality	Each	13	1,071.40	13,928
	<b>Chapter-2,item-2b,Page-7</b>				
8	<b><u>BELGIUM MIRROR 24" X 18"</u></b> Providing and fixing 24" x18" beveled edge mirror of belgium glass complete with ⅛" thick hard board and c.p screw fixed to wooden plate. Superior Quality	Each	43	2,376.00	102,168
	<b>Chapter-2,item-3a,Page-7</b>				
9	<b><u>SOAP TRAY EARTHEN</u></b> Supplying & fixing soap tray earthen ware with c.p screw etc. complete.	Each	21	497.20	10,441
	<b>Chapter-2,item-5,Page-8</b>				
10	<b><u>CP BIB COCK ½" Dia</u></b> S/Fixing long bib-cock of crystal head with ½" dia	Each	15	1,384.24	20,764
	<b>Chapter-6,item-13(b),Page-19</b>				
11	<b><u>SHOWER ROSE CP BRASS 4" Dia</u></b> Supplying & fixing jet shower with rod of superior quality single c.p head ½" dia	Each	5	1,142.24	5,711
	<b>Chapter-6,item-15,Page-19</b>				
12	<b><u>HANDLE VALVES</u></b> Providing and fixing handle valves (china). a) ½" dia b) ¾" dia c) 1" dia d) 1½" dia e) 2" dia	Each Each Each Each Each	6 14 16 20 20	200.42 271.92 365.42 640.42 1,382.92	1,203 3,807 5,847 12,808 27,658
	<b>Chapter-6,item-5,Page-17</b>				

S.No	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
13	<b><u>WASH BASIN MIXTURE CP ½" Dia</u></b> Supplying/Fixing wash basin mixture of superior quality with c.p head ½" dia. <b>Chapter-6,item-14(b),Page-19</b>	Each	43	3,179.00	136,697
14	<b><u>C.P MUSLIM SHOWER</u></b> Supplying & fixing C.P Muslim Shower with crystal head etc. complete. <b>Chapter-6,item-19(b),Page-19</b>	Each	13	3,432.00	44,616
15	<b><u>C.C GULLY TRAP 6"x6"x4"</u></b> Providing & fixing 6"x4" C.C gully trap with 4" outlet complete with 4" thick 1:2:4 C.C for bed & ½" thick cement plaster (1:3) to the kerb, C.I grating 6"x 6" & C.I cover and frame 12"x12" (inside) etc.complete. <b>Chapter-6 Item-1 C-(ii) , Page-24</b>	Each	10	1,429.67	14,297
16	<b><u>STAINLESS STEEL SINK</u></b> Providing and fixing steel sinks stainless local make complete with cast iron or wrought iron brackets 6 inches built in wall,1-½" C.P rubber plug chrome plated brass chain ,1-½"C.P brass waste, with 1-½" P.V.C waste pipe & making requisite number of holes in wall & plinth & floor for pipe connection & making good in cement concrete 1:2:4. Steel sink stainless sized 36" x 18" local make (Standard Pattern). <b>Chapter-1,item-19b,Page-6</b>	Each	2	5,162.30	10,325
17	<b><u>SINK MIXTURE CP ½" Dia</u></b> Supplying/Fixing sink mixture cock of superior quality with c.p head etc. complete. <b>Chapter-6,item-17,Page-19</b>	Each	2	2,745.60	5,491
<b>COST WITHOUT PIPES</b>					<b>920,201</b>
<b>PERMIUM _____% ABOVE OR BELOW</b>					
<b>(A) TOTAL COST WITHOUT PIPES</b>					

S.No	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
18	<b><u>G.I PIPES WATER SUPPLY (Internal)</u></b> Providing G.I Pipes, specials, and clamps etc, including fixing cutting & fitting complete with and I/c the cost of breaking through walls and roof, making good etc. paiting two coats after cleaning the pipe etc. with white zink paint with pigment to match the colours of the building and testing with water to a pressure head of 200 feet and handling. a) 1" dia b) 1½" dia c) 2" dia <b>Chapter-4,item-1,Page-12</b>	Rft Rft Rft	125 566 572	128.55 188.97 233.0	16,069 106,957 133,276
19	<b><u>G.I PIPES GAS SUPPLY (Internal)</u></b> Providing G.I Pipes, specials, and clamps etc, including fixing cutting & fitting complete with and I/c the cost of breaking through walls and roof, making good etc. paiting two coats after cleaning the pipe etc. with white zink paint with pigment to match the colours of the building and testing with water to a pressure head of 200 feet and handling. a) ½" dia b) ¾" dia c) 1" dia <b>Chapter-4,item-1,Page-12</b>	Rft Rft Rft	120 375 600	81.03 104.24 128.55	9,724 39,090 77,130
20	<b><u>U PVC PIPES (Sewerage Internal )</u></b> Providing, Laying uPVC pressure Pipes of Class 'B' (equivalent make) fixing in trenches i/c cutting, fitting and jointing with 'Z' joint with one rubber ring i/c testing with water to a head 61 meter or 200 ft. a) 3" Dia b) 4" Dia c) 5" Dia <b>Chapter-(II)D,item-1(a,b,c)Page-22</b>	Rft Rft Rft	375 610 410	90 137 187	33,750 83,570 76,670
21	<b><u>U PVC PIPES (Rain Water Pipe Internal)</u></b> Providing, Laying uPVC pressure Pipes of Class 'B' (equivalent make) fixing in trenches i/c cutting, fitting and jointing with 'Z' joint with one rubber ring i/c testing with water to a head 61 meter or 200 ft. a) 3" Dia <b>Chapter-(II)D,item-1(a)Page-22</b>	Rft	450	90.00	40,500
<b>COST FOR PIPES</b>					<b>616,735</b>
<b>PERMIUM _____ % ABOVE OR BELOW</b>					
<b>(B) TOTAL COST FOR PIPES</b>					

## Priced Bill of Quantities

<b>Client:</b>	QUEST NAWAB SHAH	<b>Job No.</b>	1275	<b>Revision Date :</b>	
<b>Project:</b>	SOFTWARE ENGINEERING DEPARTMENT	<b>Prepd. By</b>		<b>Date:</b>	
<b>Consult:</b>	Naqvi & Siddiquie, Islamabad	<b>Chkd. By</b>			
<b>Non-Schedule Item (Internal)</b>					
S.No	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
1	<p><b><u>VANITY TYPE BASIN</u></b>                      Glazed earthen ware Vanity type wash hand basin including all fittings which shall be of best quality manufactured by Master, Sonex or approved equivalent, with bracket set, waste pipe, waste coupling, flexible CP connection pipes, CP T-stop cocks, pillar cock including mixer, heads, washers, CP bottle traps, rubber plug with chain and other relevant fittings, (All accessories/ fittings shall be Master, Sonex or approved equivalent) complete in all respect as per drawings, conforming to specification and as directed by the Engineer.</p>	Each	38		
2	<p><b><u>CLEANOUT</u></b>                      Providing and fixing Stainless Steel cleanout special quality as approved.                      a) 3"                      b) 4"                      c) 5"</p>	Each Each Each	4 18 11		
3	<p><b><u>GAS GEYSER</u></b>                      Providing and fixing gas water gyser 14SWG GI water tank, 22SWG MS sheet external cover 4" thick high density glass wool (as per approved manufacturer) including gas and water connections, commissioning and testing etc complete.                      a) 10 Gallons                      b) 50 Gallons</p>	Each Each	3 7		
4	<p><b><u>PPR PIPES</u></b>                      Supply &amp; Fixing of PPR (Poly Propylene Random) Pipes i/c cutting jointing with all fittings i/c Socket, Bend ,Tea , Elbow etc inside Bathrooms, Kitchen etc i/c cutting of wall and floor as required ( Class PN-20). External dia as below                      a) dia 25 mm                      b) dia 32 mm                      c) dia 40 mm                      d) dia 50 mm</p>	Each Each Each Each	1,300 850 225 130		
<b>TOTAL FOR NON-SCHEDULE ITEMS</b>				<b>TOTAL</b>	

**SOFTWARE ENGINEERING DEPARTMENT**

**QUEST, NAWABSHAH**

**SUMMARY OF COST - EXTERNAL WORKS**

<b>S.#</b>	<b>Description</b>	<b>Amount (Rs.)</b>
<b>A</b>	<b>Over Head Tank</b>	
1	Structure works without Steel	
2	Structure works with Steel	
3	Non Schedule item	
	<b>Total - A</b>	
<b>B</b>	<b>External Works</b>	
1	Schedule Civil Works except steel	
2	Schedule Civil Works steel	
3	Plumbing Schedule Works	
4	Plumbing Non Schedule Works	
	<b>Total: - B</b>	
	<b>Grand Total (A+B)</b>	

\_\_\_\_\_  
Client

\_\_\_\_\_  
Contractor



## Priced Bill of Quantities

S.No	DESCRIPTION	UNIT	QTY.	RATE(RS)	AMOUNT(RS)
<b>STRUCTURE WORK FOR O.H WATER TANK ( 02 No)</b>					
<b>Client:</b>	QUAID-E-AWAM UNIVERSITY OF ENGINEERING SCIENCE AND TECHNOLOGY NAWABSHAH, SINDH	<b>Job No.</b>	PR 1275	<b>Revision Date :</b>	
<b>Project:</b>	SOFTWARE ENGINEERING DEPARTMENT	<b>Prepd. By</b>		<b>Date:</b>	
<b>Consult:</b>	Naqvi & Siddiquie, Islamabad	<b>Chkd. By</b>			
<b>Item-01</b>	<b><u>REINFORCED CEMENT CONCRETE</u></b> Reinforced cement concrete (1:1½:3 ) using Hi Bond Pre Packaged Polymer Modified Mortar (DHPMM) or more rich to provide 6"x12" cylinder strength of 4000 psi at 28 days age (equivalent cube strength = 4500 psi) including all labour and material except the cost of steel reinforcement and its labour for bending and binding which will be paid separately. This rate also includes all kinds of forms, moulds, lifting, shuttering, curing, rendering and finishing exposed surface including screening and washing of stone aggregate. a) Columns b) Beams c) Bottom Slab d) Walls e) Top Slab  <b>Chapter-04,Item 6(a)(II) Page-17</b>				
		per cft	32.00	361.20	11,558.40
		per cft	79.00	361.20	28,534.80
		per cft	577.00	361.20	208,412.40
		per cft	650.00	361.20	234,780.00
		per cft	431.00	361.20	155,677.20
<b>Item-02</b>	<b><u>PVC water stopper</u></b> Providing "Expansion Joint "in concrete work of 9" wide corugated PVC water stopper (with bulb) i.c soldering cost of material and labour etc. complete. <b>Chapter-(II), ItemB(2) Page-56</b>				
		Rft	151.00	463.00	69,913.00
<b>Item-03</b>	<b><u>HI BOND PRE-PACKAGED POLYMER MODIFIED MORTOR (DHPMM)</u></b> Extra cost due to use of Hi Bond Pre-packaged Polymer Modified mortor (DHPMM) as an admixture in concrete mix for increasing durability, to be used in concreting, flooring, block/brick stone masonry or plastering as % by weight of cement. (For O-H Tank) i) Over head tank <b>Chapter-04, Item 7(ii) Page 17</b>				
		Kg	1,170.00	459.80	537,966.00
<b>Item-04</b>	<b><u>MS RUNGS 3/4" DIA</u></b> Fabrication of mild steel reinforcement for cement concrete including cutting, bending, laying in position, making joints and fastenings including cost of bending wire (also includes removal of rust) <b>Chapter-04, Item 8(a) Page 17</b>				
		Cwt	0.54	5,757.95	3,109.29
<b>Item-05</b>	<b><u>TERRAZO FINISH 3/8" THICK DADO</u></b> Mosaic or dado or skirting one part of grey cement and two parts of marble chips laid over 1/2" thick cement plaster 1:3 complete with finishing. (1/2" thick) <b>Chapter-08, Item 39(b) Page 45</b>				
		%sft	1,566.00	10,580.93	165,697.36

S.No	DESCRIPTION	UNIT	QTY.	RATE(RS)	AMOUNT(RS)
Item-06	<b>VENT PIPE (PVC) 3" DIA CLASS 'B'</b> Item E(4)(b),Part-B(II) Vol-III, Page 23	Rft	14.00	136.00	1,904.00
Item-07	<b>C.I MAN HOLE COVER AND FRAME</b> Providing and fixing C.I Manhole Cover with frame i/c cost of material. PHE Chapter -II, Item (I) 1 Page-36	Cwt	1.57	5,757.95	9,039.98
Item-08	<b>ORNAMENTAL JALI</b> Providing & Fixing ornamental cement jali 2" thick 1:2:4 without steel Ch#4, item 11 (i) , page 13	per Sft	1,002.00	226.00	226,452.00
<b>TOTAL COST WITHOUT STEEL</b>					<b>1,653,044.44</b>
PERMIUM _____% ABOVE OR BELOW					
<b>(A)-TOTAL COST WITHOUT STEEL</b>					
Item-09	<b>STEEL REINFORCEMENT</b> a)Fabrication of mild steel reinforcement for cement concrete including cutting, bending, laying in position, making joints fastenings, including cost of binding wire also includes removal of rust from bars. a) Grade- 60 Chapter No. 04, Item 8(a) & (b) page-15	per Cwt	156.69	5,304.20	831,115.10
<b>TOTAL COST FOR STEEL</b>					<b>831,115.10</b>
PERMIUM _____% ABOVE OR BELOW					
<b>(B)-TOTAL COST FOR STEEL</b>					
Item-10	<b>THERMOPORE SHEET</b> Providing and fixing thermopore sheet on outside of overhead water tank 2" thick Non-Schedule item	per Sft	986.00		
<b>(C)-TOTAL COST FOR Non Schedule items</b>					

## Priced Bill of Quantities

S.No	DESCRIPTION	UNIT	QTY.	RATE(RS)	AMOUNT(RS)
<b>STRUCTURE WORK FOR EXTERNAL</b>					
<b>Item-01</b>	<b><u>EXCAVATION FOR FOUNDATION</u></b> Excavation in foundation of Building Bridges and other structure including dagbelling dressing, refilling around structure with excavated earth watering and ramming lead upto 5 ft. In Ordinary soil <b>Chapter 01, Item 18(b) Page-4</b>	%0cft	2,065.00	3176.25	6,558.96
<b>Item-02</b>	<b><u>EARTH FILLING</u></b> Filling, watering and ramming earth under floor with new earth (Excavated from outside) lead upto one chain and lift upto 5 feet. a) Around building <b>Chapter 01, Item 21 Page-4</b>	%0cft	62,812.00	3630	228,007.56
<b>Item-03</b>	<b><u>P.C.C ( 1:4:8 )</u></b> Cement concrete plain (1:4:8) using sulphate resistant cement type (v) including placing, compacting, finishing, curing, complete, (Including screening and washing of stone aggregate without shuttering). i) Footing <b>Chapter 04, Item 5(i) Page-16</b>	%cft	1,837.00	11288.75	207,374.34
<b>Item-04</b>	<b><u>REINFORCED CEMENT CONCRETE (S.R Cement)</u></b> Reinforced cement concrete ( 1:2:4 ) using sulphate resistant cement type (v) or more rich to provide 6"x12" cylinder strength of 3000 psi at 28 days age (equivalent cube strength = 3750 psi) including all labour and material except the cost of steel reinforcement and its labour for bending and binding which will be paid separately. This rate also includes all kinds of forms, moulds, lifting, shuttering, curing, rendering and finishing exposed surface including screening and washing of stone aggregate. i) Footing ii) Walls iii) External Stair <b>Item 6(a)(I) Page-17</b>	per cft	242.00	337	81,554.00
		per cft	672.00	337	226,464.00
		per cft	100.00	337	33,700.00
<b>Item-05</b>	<b><u>KERB STONE</u></b> Providing and fixing precast edge block 3750 psi industrial made 6"x12"x12" in size i/c cost of cartage, excavation, form work for haunching, 1450 PSI lean concrete, 2250 PSI concrete for haunching, 1:4 cement sand mortar <b>Chapter#12, Page#14 Item#14</b>	Rft	1,710.00	297.01	507,887.10

S.No	DESCRIPTION	UNIT	QTY.	RATE(RS)	AMOUNT(RS)
Item-06	<p><b><u>PAVING BLOCK</u></b>  Providing &amp; fixing cement paving blocks flooring having size of 197x97x60 (mm) of city / Quddra / cobble shape with natural colours, having strength b/w 5000 psi to 8500 psi I/c filling the joints with hill sand and laying in specific manner / pattern and design etc: complete  <b>Chapter#8, Page#43 Item#72</b></p>	Sft	17,721.00	199.77	3,540,124.17
Item-07	<p><b><u>SAND FILLING</u></b>  Sand filling under floor foot path/plinth protection and where required including laying, levelling, dressing compacting and complete  <b>Chapter 5, Page-22, Item-29</b></p>	%0cft	3,681.00	1141.25	4,200.94
Item-08	<p><b><u>BRICK MASONRY IN FOUNDATION &amp; PLINTH (1:6)</u></b>  Pacca brick work in foundation &amp; plinth in cement sand mortor 1:6 using sulphate resistant cement type (v) .  <b>Chapter#1 Item 4(e) Page-21</b></p>	%cft	150.00	11948.36	17,922.54
Item-09	<p><b><u>SWEET EARTH</u></b>  Supply of clean screened (River or Pit) sand within 5 chains including removal of Top crust of earth or over burden and royalty to the Government or cost to the Private Owner.  <b>Chapter#1, Page#5 Item#36</b></p>	% Cft	4,944.00	718.82	35,538.46
Item-10	<p><b><u>P.C.C ( 1:2:4 )</u></b>  Cement concrete plain (1:2:4) using sulphate resistant cement type (v) including placing, compacting, finishing, curing, complete, (Including screening and washing of stone aggregate without shuttering).  i) Floor  <b>Chapter#04 Item 5(f) Page-16</b></p>	%cft	662.00	14429.25	95,521.64
Item-11	<p><b><u>Preparation of Sub-Grade</u></b>  Preparing sub grade including earth excavation or filling to an average depth of 9" dressing to camber and consolidation with power roller.  <b>Vol-III Part(VI) Item 9 Page-2</b></p>	% Sft	15,703.00	526.28	82,642
Item-12	<p><b><u>Sub-Base</u></b>  Preparing sub-base course by supplying and spreading stone metal 1-1/2"-2" guage of approved quality from approved quarry in required thickness to proper camber and grade including hand packing filling voids with 10 cft: of screening and non plastic quarry fines of approved quality and guage from approved source watering and compacting to achive 98-100% density as per modified AASHTO specifications (Rate includes all cost of materials T&amp;P and carriage upto 3 chains  <b>Vol-III Part(VI) Item 11(c) Page-4</b></p>	% Cft	5,182.00	4359.76	225,923

S.No	DESCRIPTION	UNIT	QTY.	RATE(RS)	AMOUNT(RS)
<b>Item-13</b>	<b>Base Course</b> Preparing base course i/c supplying and spreading stone metal of approved quality properly graded to maximum size of 1-1/2" in required thickness to proper camber and grade including supplying and spreading 15 Cft: screenings and non plastic quarry fines, filling depressions with stone metal after initial rolling including watering and compacting the same so as to acieve 100% density as per modified AASHTO specifications. (Rate includes providing and using templates, camber plates, screens, forms as directed. (Rate includes all cost of materials T&P abd carriage upto 3 chains <b>Vol-III Part(VI) Item 13(a) Page-5</b>	% Cft	5,182.00	5542.24	287,199
<b>COST WITHOUT STEEL</b>					<b>5,580,617.09</b>
<b>PERMIUM _____% ABOVE OR BELOW</b>					
<b>(A)-TOTAL COST WITHOUT STEEL</b>					
<b>Item-14</b>	<b>STEEL REINFORCEMENT</b> a)Fabrication of mild steel reinforcement for cement concrete including cutting, bending, laying in position, making joints fastenings, including cost of binding wire also includes removal of rust from bars.(Grade-60) <b>Chapter No. 04, Item 8(a) page-13</b>	per Cwt	54.89	5001.7	274,543.31
<b>COST FOR STEEL</b>					<b>274,543.31</b>
<b>PERMIUM _____% ABOVE OR BELOW</b>					
<b>(B)-TOTAL COST FOR STEEL</b>					

## Priced Bill of Quantities

<b>Client:</b>	QUEST NAWAB SHAH	<b>Job No.</b>	1275	<b>Revision</b>	
<b>Project:</b>	SOFTWARE ENGINEERING DEPARTMENT	<b>Prepd. By</b>		<b>Date :</b>	
<b>Consult:</b>	Naqvi & Siddiquie, Islamabad	<b>Chkd. By</b>		<b>Date:</b>	
<b>WATER SUPPLY (External)</b>					
S.No	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
1	<b><u>EXCAVATION</u></b> Excavation for pipe line in trenches, and pits in hard soils i/c trimming and dressing sides to true alignment and shape levelling of bed of trenches to correct level and grade, cutting joint holes and disposal of surplus earth with in one chain as directed by Engineer Incharge. Providing fence guards, lights, flags and temporary crossings for non-vehicular traffic where ever required lift upto 5 ft.(1.52m) and lead upto one chain (30.5 m). a) Hard  <b style="text-align: center;">PHE Chapter# II, Item-3 , Page-61</b>	%0Cft	3369	3,900.00	13,139.10
2	<b><u>SAND BED</u></b> Supply of clean screened (River or Pit) sand within 5 chains including removal of Top crust of earth or over burden and royalty to the Government or cost to the Private Owner.  <b style="text-align: center;">Chapter#1, Page#5, Item#36</b>	%Cft	1444	718.82	10,379.76
3	<b><u>VALVE 3" Dia</u></b> Providing and fixing full way gun matel valves with wheels, threaded or flanged ends with rubber washers Standard Pattern (Note: Standard manufacturer by M/S Anwar Mechanical Works. a) 3" Dia <b style="text-align: center;">Water Supply &amp; Sanitary Chapter#6, Item-4B(h), Page-17</b>	Each	9	1,940.84	17,467.56
4	<b><u>MAKING CONNECTION TO PUBLIC HEALTH MAINS</u></b> a) 3" dia <b style="text-align: center;">Water Supply &amp; Sanitary Chapter#6, Item-10(a), Page-18</b>	Each	1	399.96	399.96
5	<b><u>VALVE CHAMBERS</u></b> Providing Chamber 3'x2' (915x615 mm) inside dimension 4 1/2' (1372 mm) deep as per approved design for sluice valve 3" to 12" dia with 18" (457 mm) dia inside cast iron cover and frame (wt=1 cwt 3 qr) fixed in RCC 1:2:4 (102 mm) thick (with 5 Lbs steel per cft) 9" (299 mm) thick brick masonry wall set in 1:6 cement mortar 6" (1152 mm) thick cement concrete 1:3:6 in foundation 1" (25 mm) thick cement concrete 1:3:6 in foundation 1" (25 mm) thick cement concrete 1:2:4 flooring 1/2" (12.5 mm) thick cement plaster 1:3 to all inside wall surface and to top i/c providing and fixing M.S foot rest at every one foot beyond 2 1/2 ft depth curing, excavation, back filling and disposal of surplus earth etc. complete.  <b style="text-align: center;">PHE Chapter-2 ,item-(P)1,Page-49</b>	Each	9	18,820.00	169,380.00
<b>TOTAL COST WITHOUT PIPES</b>					<b>210,766</b>
<b>PERMIUM _____% ABOVE OR BELOW</b>					
<b>(A) TOTAL COST WITHOUT PIPES</b>					

S.No	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
6	<p><b>GI PIPE</b></p> <p>Providing G.I pipe &amp; special etc including fixing cutting &amp; fitting complete with &amp; i/c the cost of cutting trench upto 2-½" feet deep refilling watering ramming and disposal of surplus earth within one chain and painting two coats of bitumen paint to pipes &amp; specials after cleaning &amp; hessian cloth soaked in maxphalt composition wrapped tightly round pipes and testing to a pressure head of 200 feet and handling.</p> <p>a) 3" Dia</p> <p><b>Water Supply &amp; Sanitary Chapter-5, (Part-C),Item-1(viii), Page-14</b></p>	Rft	550	355.27	195,399
<b>TOTAL COST FOR PIPES</b>					<b>195,399</b>
<b>PERMIUM _____% ABOVE OR BELOW</b>					
<b>(B) TOTAL COST FOR PIPES</b>					

## Priced Bill of Quantities

<b>Client:</b>	QUEST NAWAB SHAH	<b>Job No.</b>	1,275.00	<b>Revision</b>	
<b>Project:</b>	SOFTWARE ENGINEERING DEPARTMENT	<b>Prepd. By</b>		<b>Date :</b>	
<b>Consult:</b>	Naqvi & Siddiquie, Islamabad	<b>Chkd. By</b>		<b>Date:</b>	
<b>External sewerage</b>					
S.No	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
1	<p><b><u>EXCAVATION</u></b>                      i) Excavation for pipe line in trenches, and pits in hard soils i/c trimming and dressing sides to true alignment and shape levelling of bed of trenches to correct level and grade, cutting joint holes and disposal of surplus earth with in a one chain as directed by Engineer Incharge. Providing fence guards,lights,flags and temporary crossings for non-vehicular traffic where ever required and lead upto one chain (30.5 m).                      a) Pipes                      b) Manholes</p> <p style="text-align: center;"><b>PHE Chapter# II, Item-3 , Page-61</b></p>	%0Cft %0Cft	23,900.00 15,624.00	4,450.00 4,450.00	106,355.00 69,526.80
2a	<p><b><u>MANHOLES</u></b>  <b>4" to 9" dia 4'x3'x7'9"</b>                      Constructing manhole for the required dia of circular sewer and 7'-9" depth with walls of B.B in cement mortar 1:3 cement plastered 1:3, ½" thick, inside of walls and 1" (25mm) thick over benching and channel i/c fixing C.I manhole cover with frame of clear opening 2'x2' (610 x 610 mm ) of 4.5 cwt. embedded in plain C.C 1:2:4 and two way reinforced 6" thickness i/c fixing 1"(25 mm) dia M.S steps 6" (150 mm) wide projecting 4" (102 mm ) from the face of wall at 12" (305 mm) c/c duly painted etc, complete specification and drawing.</p> <p style="text-align: center;"><b>PHE Chapter-2 (P),item-2(a),Page-47</b></p>	Each	16.00	42,745.00	683,920.00
2b	<p><b><u>MANHOLES</u></b>  <b>4" to 12" dia 2'x2'x3'6"</b>                      Constructing manhole or inspection chamber for the required dia of circular sewer and 3'-6" depth with walls of B.B in cement mortar 1:3 cement plastered, ½" thick, inside of walls and 1" (25mm) thick over benching and channel i/c fixing C.I manhole cover with frame of clear opening 1-1/2'x1 1/2' (457x457 mm ) of 1.75 cwt. (88.9 kg) embeded in plain C.C 1:2:4 and fixing 1"(25 mm) dia M.S steps 6" (150 mm) wide projecting 4" (102 mm ) from the face of wall at 12" (305 mm) c/c duly painted etc. Complete as per standard specification and drawing.</p> <p style="text-align: center;"><b>Chapter-2 (O),item-1(a),Page-46</b></p>	Each	14.00	14,748.00	206,472.00
3	<p><b><u>P.C.C ( 1:2:4)</u></b>                      Cement concrete plain (1:2:4) using sulphate resistant cement type (v) including placing, compacting, finishing, curing, complete, (Including screening and washing of stone aggregate without shuttering).                      a) Base Slab                      b) P.C.C Benching                      c) P.C.C Cradle</p> <p style="text-align: center;"><b>Chapter-4 Item 5(f) Page-16</b></p>	%cft %cft %cft	428.00 234.00 222.00	14,429.25 14,429.25 14,429.25	61,757.19 33,764.45 32,032.94
<b>COST WITHOUT PIPES</b>					<b>1,193,828.37</b>
<b>PERMIUM _____% ABOVE OR BELOW</b>					
<b>(A) TOTAL COST WITHOUT PIPES</b>					



S.No	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
4	<p><b>R.C.C PIPES CLASS 'B'</b></p> <p>Providing R.C.C pipe with collars class 'B' and fixing in trench including cutting, fitting and jointing with maxphalt composition &amp; cement mortar 1:1 and testing with water pressure to a head of 22.5 meter or 75 ft. a) 9" Dia</p> <p style="text-align: center;"><b>PHE Chapter-II, Item-2d , Page-16</b></p>	Rft	1,075.00	163.00	175,225.00
5	<p><b>PVC Pipe</b></p> <p>Providing, Laying uPVC pipes of Class 'B' fixing in trench i/c cutting, fitting and jointing with solvent cement i/c testing with water to a head of 61 meter or 200ft. a) 6" Dia</p> <p style="text-align: center;"><b>PHE Chapter-II,Item-D-4d , Page-23</b></p>	Rft	138.00	259.00	35,742.00
				<b>COST FOR PIPES</b>	<b>210,967.00</b>
				<b>PERMIUM _____% ABOVE OR BELOW</b>	
				<b>(B) TOTAL COST FOR PIPES</b>	

## Priced Bill of Quantities

<b>Client:</b>	QUEST NAWAB SHAH	<b>Job No.</b>	1275	<b>Revision Date :</b>	
<b>Project:</b>	SOFTWARE ENGINEERING DEPARTMENT	<b>Prepd. By</b>			
<b>Consult:</b>	Naqvi & Siddiquie, Islamabad	<b>Chkd. By</b>		<b>Date:</b>	

### GAS SUPPLY (External)

S.No	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
1	<p><b><u>EXCAVATION</u></b> Excavation for pipe line in trenches, and pits in hard soils i/c trimming and dressing sides to ture alignment and shape levelling of bed of trenches to correct level and grade, cutting joint holes and disposal of surplus earth with in a one chain as directed by Engineer Incharge. Providing fence guards,lights,flags and temporary crossings for non-vehicular traffic where ever required lift upto 5 ft.(1.52m) and lead upto one chain (30.5 m).</p> <p>a) Hard</p> <p style="text-align: center;"><b>PHE Chapter# II, Item-3 , Page-61</b></p>	1000Cft	3553	3,900.00	13,857
2	<p><b><u>SAND BED</u></b> Supply of clean screened (River or Pit) sand within 5 chains including removal of Top crust of earth or over burden and royalty to the Government or cost to the Private Owner.</p> <p style="text-align: center;"><b>Chapter#1, Page#5 Item#36</b></p>	%Cft	1350	718.82	9,704
3	<p><b><u>VALVE CHAMBERS</u></b> Providing chamber 3'x2' (915x615 mm) inside dimension, 4½ft (1.372 m) deep as per approved design for sluice valve 3" to 12" dia, with 18" (457 mm) dia inside cast iron cover and frame (wt=1 cwt 3 qr ), fixed in R.C.C 1:2:4 4" (102 mm ) thick (with 5 lbs steel per cft ), 9" (299 mm ) thick brick masonry wall set in 1:6 cement mortar, 6" thick cement concrete 1:3:6 in foundation, 1" (25mm) thick cement concrete 1:2:4 flooring, ½" (12.5mm) thick cement plaster 1:3 to all inside wall surface and to top i/c providing and fixing M.S foot rest at every one foot beyond 2½ ft depth, curing, excavation, back filling and diposal of surplus earth etc.complete.</p> <p style="text-align: center;"><b>Water Supply &amp; Sanitary Chapter-2 (P), item-1,Page-49</b></p>	Each	12	1,882.20	22,586

S.No	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
4	<p><b><u>GAS VALVES</u></b>  Providing and fixing full way gun matel valves with wheels, threaded or flanged ends with rubber washers Standard Pattern  a) 2" Dia  <b>Water Supply &amp; Sanitary Chapter-6 Item-4B(f), Page-17</b></p>	Each	12	1,025.42	12,305
<b>COST WITHOUT PIPES</b>					<b>58,452</b>
<b>PERMIUM _____% ABOVE OR BELOW</b>					
<b>(A) TOTAL COST WITHOUT PIPES</b>					
5	<p><b><u>G.I PIPES</u></b>  Providing G.I Pipes, specials, and clamps etc, including fixing cutting &amp; fitting complete with and I/c the cost of breaking through walls and roof, making good etc. paiting two coats after cleaning the pipe etc. with white zink paint with pigment to match the coloures of the building and testing with water to a pressure head of 200 feet and handling .  a) 2" dia  <b>Water Supply &amp; Sanitary Chapter-4,item-1(vi),Page-12</b></p>	Rft	580	233.00	135,140
6	<p><b><u>MAKING CONNECTION TO MAIN LINE</u></b>  Making the Connection with Public health mains for the house hold fitting with M.S. Clamps ,Socket screw etc complete  a) 2" dia  <b>Water Supply &amp; Sanitary Chapter-4, Item-10(a), Page-18</b></p>	Each	1	399.96	400
<b>COST FOR PIPES</b>					<b>135,540</b>
<b>PERMIUM _____% ABOVE OR BELOW</b>					
<b>(B) TOTAL COST FOR PIPES</b>					

## Priced Bill of Quantities

<b>Client:</b>	QUEST NAWAB SHAH	<b>Job No.</b>	1275	<b>Revision Date :</b>	
<b>Project:</b>	SOFTWARE ENGINEERING DEPARTMENT	<b>Prepd. By</b>			
<b>Consult:</b>	Naqvi & Siddiquie, Islamabad	<b>Chkd. By</b>		<b>Date:</b>	
<b>Non-Schedule Item (External)</b>					
S.No	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
1	<p><b><u>FIRE HYDRANT</u></b></p> <p>Providing and fixing, fire hydrants B.S.S quality and weight of 2-1/2" dia (including cost of jointing material)</p> <p style="text-align: center;"><b>N.S</b></p>	Each	3		
	<b>TOTAL FOR NON-SCHEDULE ITEMS</b>			<b>TOTAL</b>	

**\*DRAWINGS**

(Tender Drawings are attached)

# SOFTWARE ENGINEERING DEPARTMENT

## QUAID-E-AWAM UNIVERSITY OF ENGINEERING SCIENCES & TECHNOLOGY

### NAWABSHAH



**MAIN CONSULTANTS**  
**NAQVI AND SIDDIQUIE**  
INC. ARCHITECT & ENGINEER  
LOWER GROUND , I&T CENTRE,  
STREET#14,PLOT#61,Opp.TO PAKISTAN  
POVERTY ALLEVIATION FUND OFFICE,  
SECTOR G-8/1,ISLAMABAD  
TEL 051-2289407-10



**ELECTRICAL ENGINEERS**  
**NAQVI AND SIDDIQUIE**  
INC. ARCHITECT & ENGINEER  
LOWER GROUND , I&T CENTRE,  
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**STRUCTURAL ENGINEERS**  
**GLOBAL ENGINEERING SERVICES**  
CONSULTING CIVIL & STRUCTURAL ENGINEERS

HOUSE # NE 122/F, STREET 7, CHAMAN ZAR  
COLONY, RAWALPINDI PH 5504306



**PLUMBING ENGINEERS**  
**GLOBAL ENGINEERING SERVICES**  
CONSULTING CIVIL & STRUCTURAL ENGINEERS

HOUSE # NE 122/F, STREET 7, CHAMAN ZAR  
COLONY, RAWALPINDI PH 5504306

**SOFTWARE ENGINEERING DEPARTMENT**  
**QUAID-E-AWAM UNIVERSITY OF ENGINEERING**  
**SCIENCES & TECHNOLOGY**  
**NAWABSHAH**

LIST OF DRAWINGS

DRG.NO	DRAWING TITLE
A-01	SITE PLAN
A-02	GROUND FLOOR PLAN
A-03	1ST FLOOR PLAN
A-04	ROOF FLOOR PLAN
A-05	ELEVATION-1,2
A-06	ELEVATION-3,4
A-07	SECTION AA,BB
A-08	DETAIL OF DOOR
A-09	DETAIL OF WINDOWS
A-10	DETAILS OF TOILET
A-11	DETAILS OF STAIR
A-12	FURNITURE LAYOUT (GROUND FLOOR PLAN)
A-13	FURNITURE LAYOUT (1ST FLOOR PLAN)
A-14	FLOOR PATTERN (GROUND FLOOR PLAN)
A-15	FLOOR PATTERN (1ST FLOOR PLAN)
A-16	FLOOR PATTERN (ROOF PLAN)
A-17	SCHEDULE OF FINSHES

ST-001,ST-002	BRIEF SPECIFICATIONS, CONSTRUCTION PROCEDURE & TYPICAL STRUCTURAL DETAILS
S-01	GENERAL TECHNICAL NOTES & SCHEDULE OF LINTELS
S-02	SCHEDULE OF FOOTINGS & COLUMNS
S-03 TO S-5	GROUND FLOOR ,FIRST FLOOR & ROOF COLUMN LAYOUT PLAN
S-06	FOOTING PLAN
S-07 TO S-09	TYPICAL DETAILS FOR FOOTINGS, COLUMNS & STAIR
S-10	FRAMING PLAN FOR FIRST FLOOR SLAB (GROUND FLOOR ROOF)
S-11	REINFORCEMENT PLAN FOR FIRST FLOOR SLAB (GROUND FLOOR ROOF)
S-12	FRAMING PLAN FOR ROOF SLAB (FIRST FLOOR ROOF)
S-13	REINFORCEMENT PLAN FOR ROOF SLAB (FIRST FLOOR ROOF)
S-14	FRAMING PLAN FOR MUMTY SLAB
S-15	REINFORCEMENT PLAN FOR MUMTY SLAB
S-16 TO S-17	SECTION A-A & PARAPET DETAILS
S-18 TO S-23	L-SECTION OF BEAMS
S-24	O.H WATER TANK DETAIL

LIST OF ELECTRICAL DRAWINGS

DRG.NO	DRAWING TITLE
E-00	ELECTRICAL LEGEND
E-01	GROUND FLOOR LIGHTING LAYOUT PLAN
E-02	FIRST FLOOR LIGHTING LAYOUT PLAN
E-03	GROUND FLOOR POWER LAYOUT PLAN
E-04	FIRST FLOOR POWER LAYOUT PLAN
E-05	GROUND FLOOR A/C AND FIRE ALARAM SYSTEM PLAN
E-06	FIRST FLOOR A/C AND FIRE ALARAM SYSTEM PLAN
E-07	GROUND FLOOR SINGLE LINE LAYOUT PLAN
E-08	FIRST FLOOR SINGLE LINE LAYOUT PLAN
E-09	MAIN LT PANEL, AND SMPB-FF LAYOUT PLAN

LIST OF PLUMBING DRAWINGS

P-01	GENERAL NOTES & LEGEND
P-02	GROUND FLOOR PLAN (Sewerage, Water Supply & Gas)
P-03	FIRST FLOOR PLAN (Sewerage, Water Supply & Gas)
P-04	ROOF PLAN SHOWING WATER SUPPLY DISTRIBUTION LINES
P-05	ROOF PLAN SHOWING STORM WATER DRAINAGE
P-06	DETAIL OF KITCHEN-1, TOILETS-1 & 2 GROUND FLOOR (Sewerage)
P-07	DETAIL OF TOILETS-3 & 4 GROUND FLOOR (Sewerage)
P-08	DETAIL OF TOILETS- 5 & 6 FIRST FLOOR (Sewerage)
P-09	DETAIL OF KITCHEN-2, TOILETS-7 & 8 FIRST FLOOR (Sewerage)
P-10	DETAIL OF TOILETS-9 & 10 FIRST FLOOR (Sewerage)
P-11	DETAIL OF KITCHEN-1, TOILETS-1 & 2 GROUND FLOOR (Water Supply)
P-12	DETAIL OF TOILETS-3 & 4 GROUND FLOOR (Water Supply)
P-13	DETAIL OF TOILETS- 5 & 6 FIRST FLOOR (Water Supply)
P-14	DETAIL OF KITCHEN-2, TOILETS-7 & 8 FIRST FLOOR (Water Supply)
P-15	DETAIL OF TOILETS-9 & 10 FIRST FLOOR (Water Supply)
P-16	DETAIL OF WATER & SEWER TRENCHES, MANHOLES & CHAMBERS

**GUEST HOUSE**

**LAWN**

Software Engineering Department

**STUDENTS CENTER**

**PROP: TECHNOLOGY CENTRE**

**CENTRAL LIBRARY**

**PROP: DATA CENTRE**


**3 NOS CLASSROOMS**

**MATHAMATICS AND STATISTIC DEPTT:**

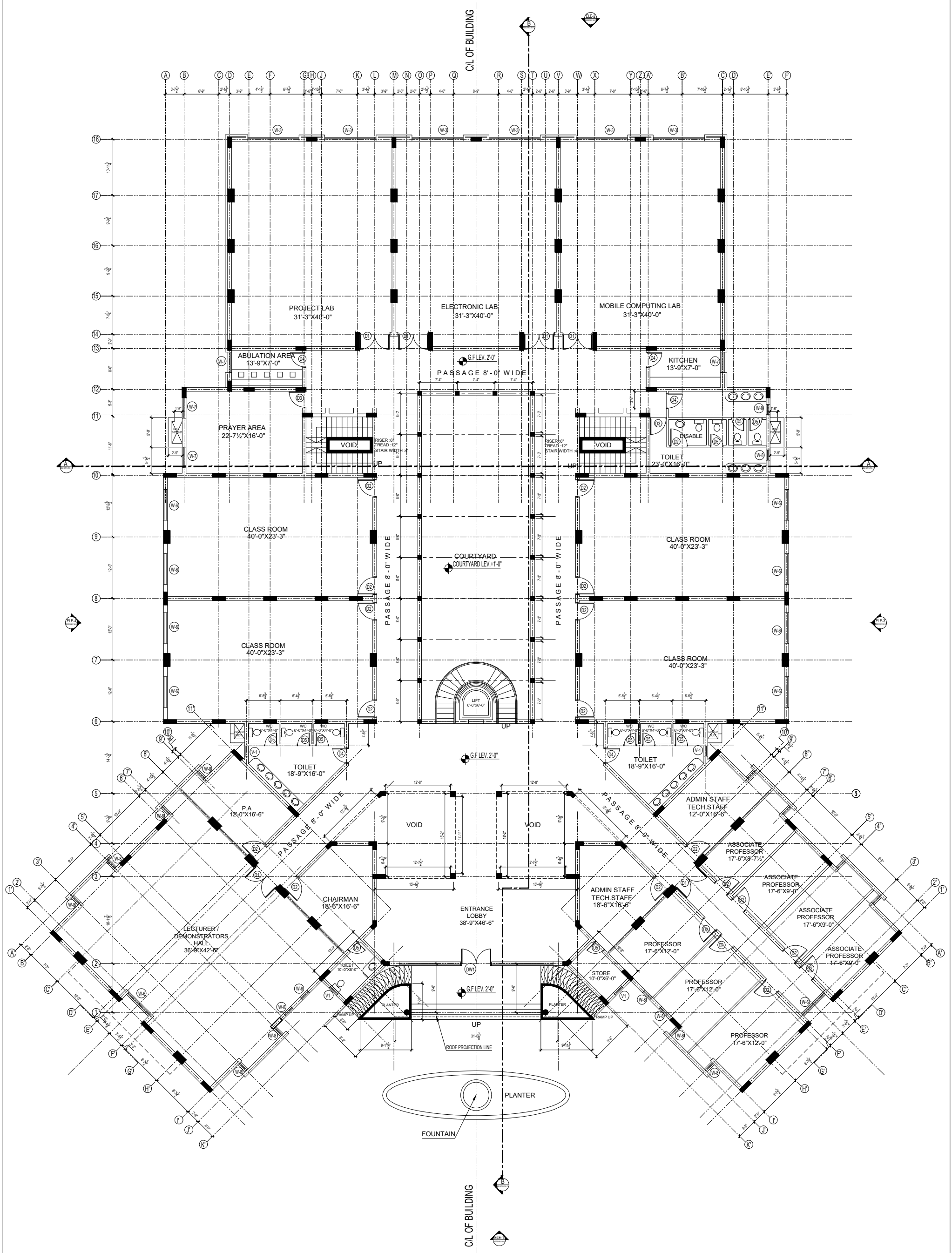
**CIVIL ENGG. DEPARTMENT**

**MECHANICAL ENGG. DEPTT**

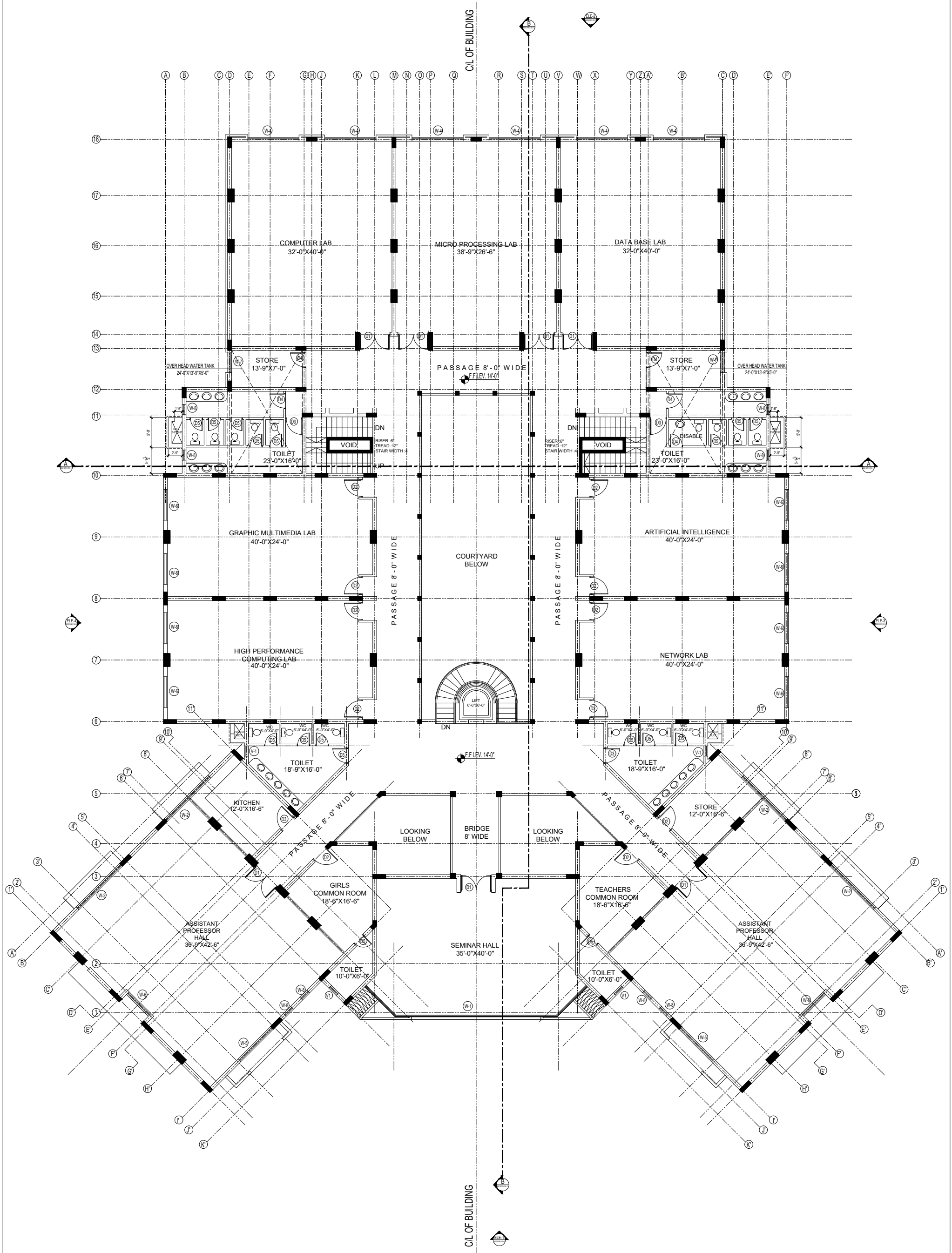
**G.ROOM SOAK PIT**

TENDER DRAWING	S.NO.	REVISION:	DATE:	KEY PLAN	PROJECT	PROJECT TITLE	DRAWING TITLE	RESIDENT ARCHITECT	CONSULTANTS	ELECTRICAL ENGINEER	PLUMBING ENGINEER	DATE	DRAWING NO.
					QUAID-E-AWAM UNIVERSITY OF ENGINEERING SCIENCES & TECHNOLOGY NAWABSHAH	Software Engineering Department	ENLARGED MASTER PLAN	PERZADA MASROOR RAZA SIDDIQUE	GLOBAL ENGINEERING SERVICES PLOT # 10, SECT # 10, PHASE # 1, CHANAYI S.A.P. CANAL, KARACHI	GLOBAL ENGINEERING SERVICES PLOT # 10, SECT # 10, PHASE # 1, CHANAYI S.A.P. CANAL, KARACHI	GLOBAL ENGINEERING SERVICES PLOT # 10, SECT # 10, PHASE # 1, CHANAYI S.A.P. CANAL, KARACHI	SCALE: 1"=4'-0"	A-01

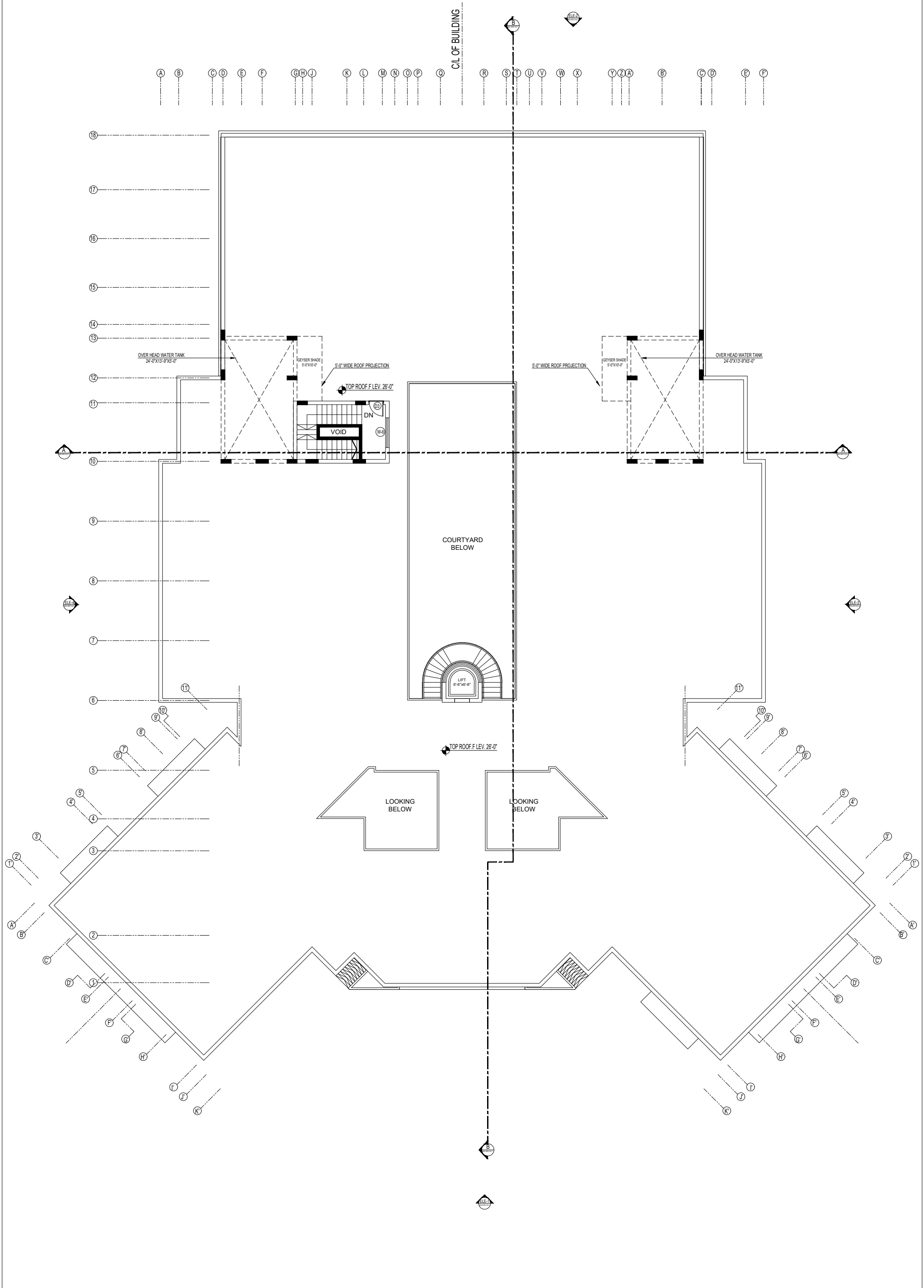




TENDER DRAWING	S.NO.	REVISION	DATE	BY	PROJECT	PROJECT TITLE	DRAWING TITLE	RESIDENT ARCHITECT	CONSULTANTS	ELECTRICAL ENGINEER	PLUMBING ENGINEER	PROJECT ARCHITECT
					QUAID-E-AWAM UNIVERSITY OF ENGINEERING SCIENCES & TECHNOLOGY NAWABSHAH	Software Engineering Department	GROUND FLOOR PLAN	PERREZADA MASROOR RAZA SIDDIQUE	NAOVI AND SIDDIQUE P.L. SIDDIQUE (ARCHITECT) LOWER GROUND - ART CENTRE UPPER GROUND - SOFTWARE ENGINEERING DEPARTMENT DIRECTOR Q.A.I. LIA. AMARJAD P.L. SIDDIQUE	NAOVI AND SIDDIQUE P.L. SIDDIQUE (ENGINEER) LOWER GROUND - ART CENTRE UPPER GROUND - SOFTWARE ENGINEERING DEPARTMENT DIRECTOR Q.A.I. LIA. AMARJAD P.L. SIDDIQUE	GLOBAL ENGINEERING SERVICES CHAND P. S. SINGH (ENGINEER) CHAND S. P. SINGH (ENGINEER)	PERREZADA MASROOR RAZA SIDDIQUE
									STRUCTURE	GLOBAL ENGINEERING SERVICES	GLOBAL ENGINEERING SERVICES	DATE
									GLOBAL ENGINEERING SERVICES	GLOBAL ENGINEERING SERVICES	GLOBAL ENGINEERING SERVICES	SCALE
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									GLOBAL ENGINEERING SERVICES	GLOBAL ENGINEERING SERVICES	GLOBAL ENGINEERING SERVICES	PERREZADA MASROOR RAZA SIDDIQUE
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									GLOBAL ENGINEERING SERVICES	GLOBAL ENGINEERING SERVICES	GLOBAL ENGINEERING SERVICES	A-02

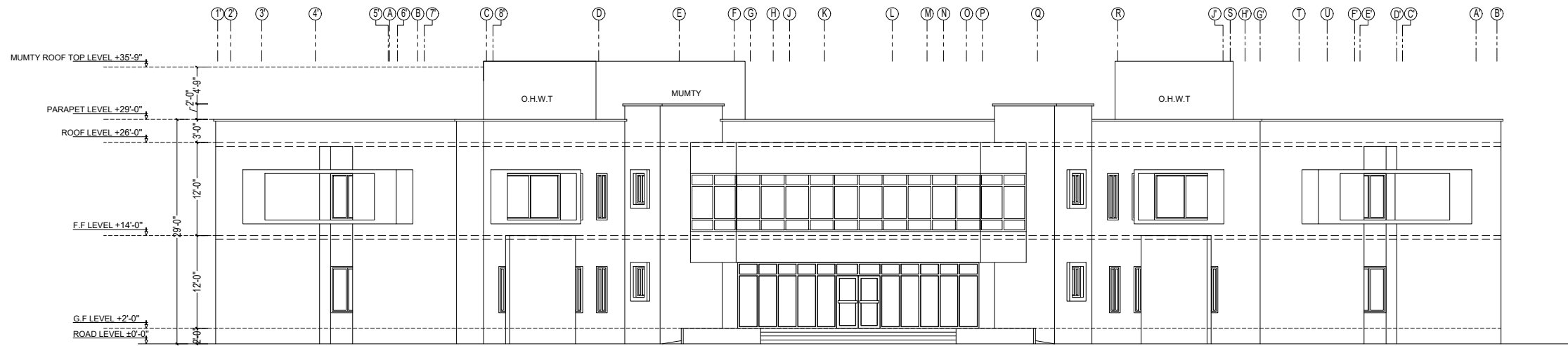


TENDER DRAWING	S.NO.	REVISION:	DATE:	KEY PLAN	PROJECT	PROJECT TITLE	DRAWING TITLE	RESIDENT ARCHITECT	CONSULTANTS	ELECTRICAL ENGINEER	PLUMBING ENGINEER	PROJECT ARCHITECT
					QUAID-E-AWAM UNIVERSITY OF ENGINEERING SCIENCES & TECHNOLOGY NAWABSHAH	Software Engineering Department	FIRST FLOOR PLAN	PERREZZA MASROOR RAZA SIDDIQUE	NAOVI AND SIDDIQUE P.L.C. (REGISTERED ARCHITECT) LOWER GROUND - ART CENTRE DIRECTOR GENERAL OFFICE TO PAKISTAN POWER & ALUMINIUM FUND OFFICE, SECTOR 4-LAHORE, PAKISTAN P.L.C. (REGISTERED)	NAOVI AND SIDDIQUE P.L.C. (REGISTERED ARCHITECT) LOWER GROUND - ART CENTRE DIRECTOR GENERAL OFFICE TO PAKISTAN POWER & ALUMINIUM FUND OFFICE, SECTOR 4-LAHORE, PAKISTAN P.L.C. (REGISTERED)	GLOBAL ENGINEERING SERVICES P.L.C. (REGISTERED ARCHITECT) LOWER GROUND - ART CENTRE DIRECTOR GENERAL OFFICE TO PAKISTAN POWER & ALUMINIUM FUND OFFICE, SECTOR 4-LAHORE, PAKISTAN P.L.C. (REGISTERED)	GLOBAL ENGINEERING SERVICES P.L.C. (REGISTERED ARCHITECT) LOWER GROUND - ART CENTRE DIRECTOR GENERAL OFFICE TO PAKISTAN POWER & ALUMINIUM FUND OFFICE, SECTOR 4-LAHORE, PAKISTAN P.L.C. (REGISTERED)
										GES	GES	GES
												SCALE: 1/4"=1'-0" DRAWN BY: M. SIDDIQUE CHECKED BY: M. SIDDIQUE DATE: 05/05/2024 DRAWING NO: A-03

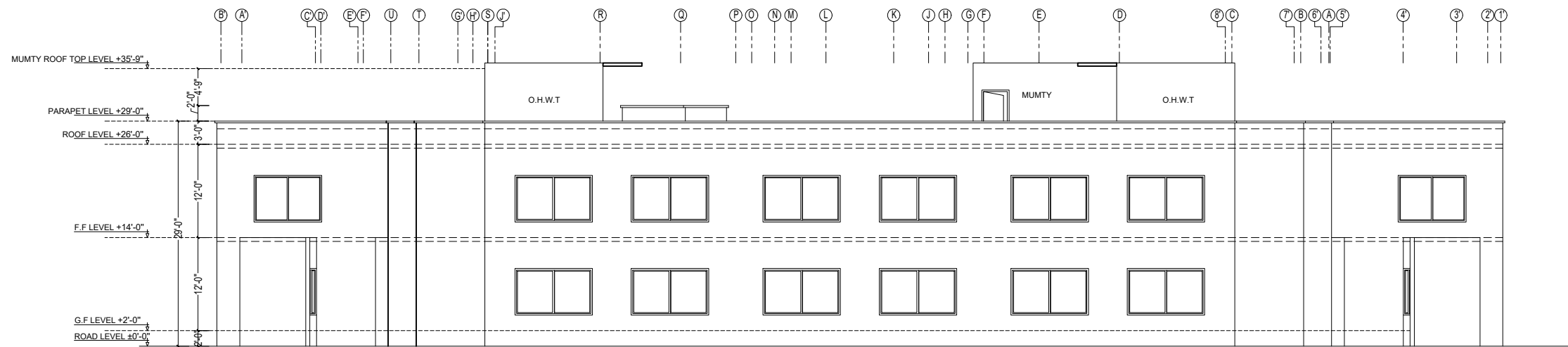


TENDER DRAWING	S.NO.	REVISION:	DATE:	KEY PLAN	PROJECT	PROJECT TITLE	DRAWING TITLE	RESIDENT ARCHITECT	CONSULTANTS	ELECTRICAL ENGINEER	PLUMBING ENGINEER	DATE	DRAWING NO.
					QUAID-E-AWAM UNIVERSITY OF ENGINEERING SCIENCES & TECHNOLOGY NAWABSHAH	Software Engineering Department	ROOF PLAN	FERRAZADA MASROOR RAZA SIDDIQUE	NAOVI AND SIDDIQUE P.O. BOX 100, KARACHI DIRECTOR GENERAL OFFICE DIRECTOR GENERAL OFFICE DIRECTOR GENERAL OFFICE DIRECTOR GENERAL OFFICE DIRECTOR GENERAL OFFICE	NAOVI AND SIDDIQUE P.O. BOX 100, KARACHI DIRECTOR GENERAL OFFICE DIRECTOR GENERAL OFFICE DIRECTOR GENERAL OFFICE DIRECTOR GENERAL OFFICE DIRECTOR GENERAL OFFICE	GLOBAL ENGINEERING SERVICES P.O. BOX 100, KARACHI DIRECTOR GENERAL OFFICE DIRECTOR GENERAL OFFICE DIRECTOR GENERAL OFFICE DIRECTOR GENERAL OFFICE DIRECTOR GENERAL OFFICE	GLOBAL ENGINEERING SERVICES P.O. BOX 100, KARACHI DIRECTOR GENERAL OFFICE DIRECTOR GENERAL OFFICE DIRECTOR GENERAL OFFICE DIRECTOR GENERAL OFFICE DIRECTOR GENERAL OFFICE	12/05/2024

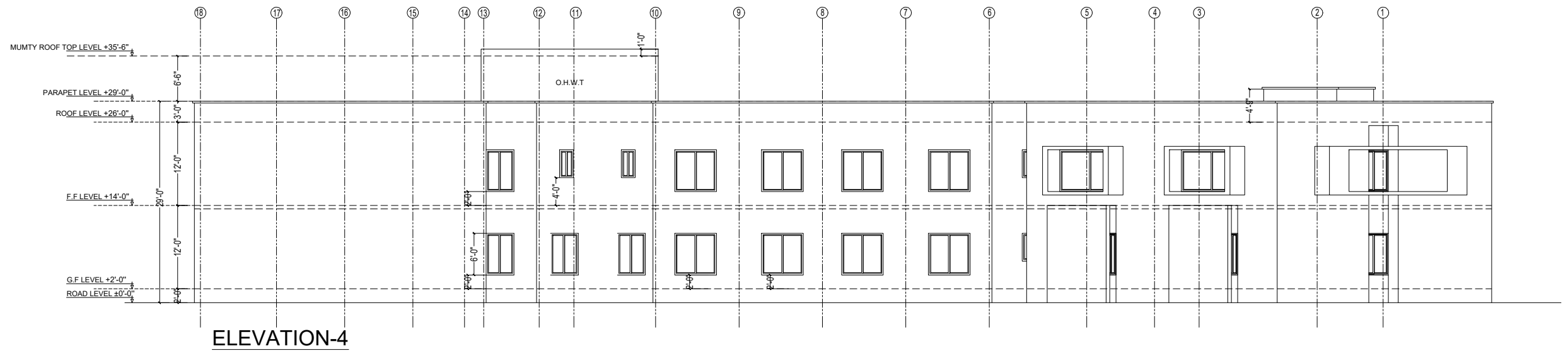
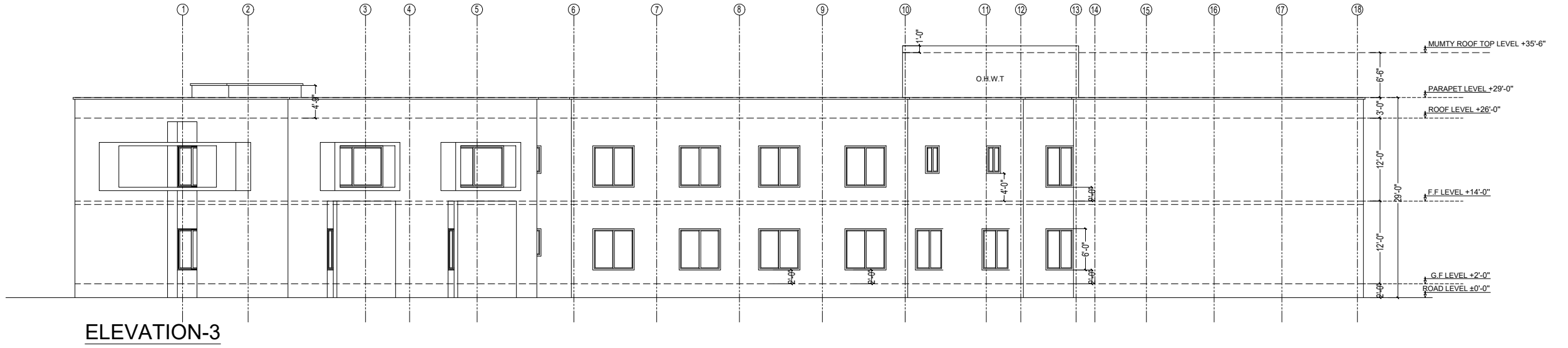
TENDER DRAWING		NO.	REVISION	DATE	BY
PROJECT		QIAD, F-AMAM UNIVERSITY OF ENGINEERING SCIENCES & TECHNOLOGY NAWABSHAH			
PROJECT TITLE		Software Engineering Department			
DRAWING TITLE		ELEVATION 1, 2			
DESIGNER ARCHITECT		PERSAZOJA MASROOR SABA SIDDIQI			
CONSULTANTS		NAQVI AND SIDDIQI CONSULTANTS CIVIL, ELECTRICAL, MECHANICAL, PLUMBING, STRUCTURAL, ENVIRONMENTAL, AND SAFETY ENGINEERS 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000			
ELECTRICAL ENGINEERS		NAQVI AND SIDDIQI			
PLUMBING ENGINEERS		NAQVI AND SIDDIQI			
MECHANICAL ENGINEERS		NAQVI AND SIDDIQI			
STRUCTURAL ENGINEERS		NAQVI AND SIDDIQI			
ENVIRONMENTAL ENGINEERS		NAQVI AND SIDDIQI			
SAFETY ENGINEERS		NAQVI AND SIDDIQI			
SCALE		AS SHOWN			
DATE		2023/05/15			
DRAWING NO.		A-05			

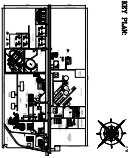


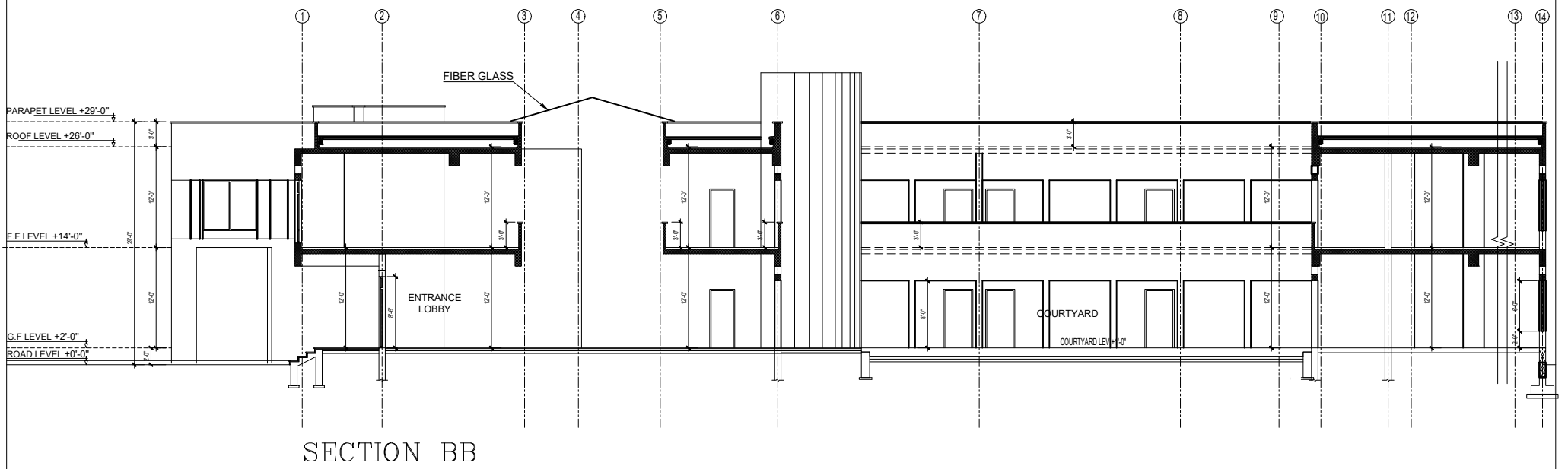
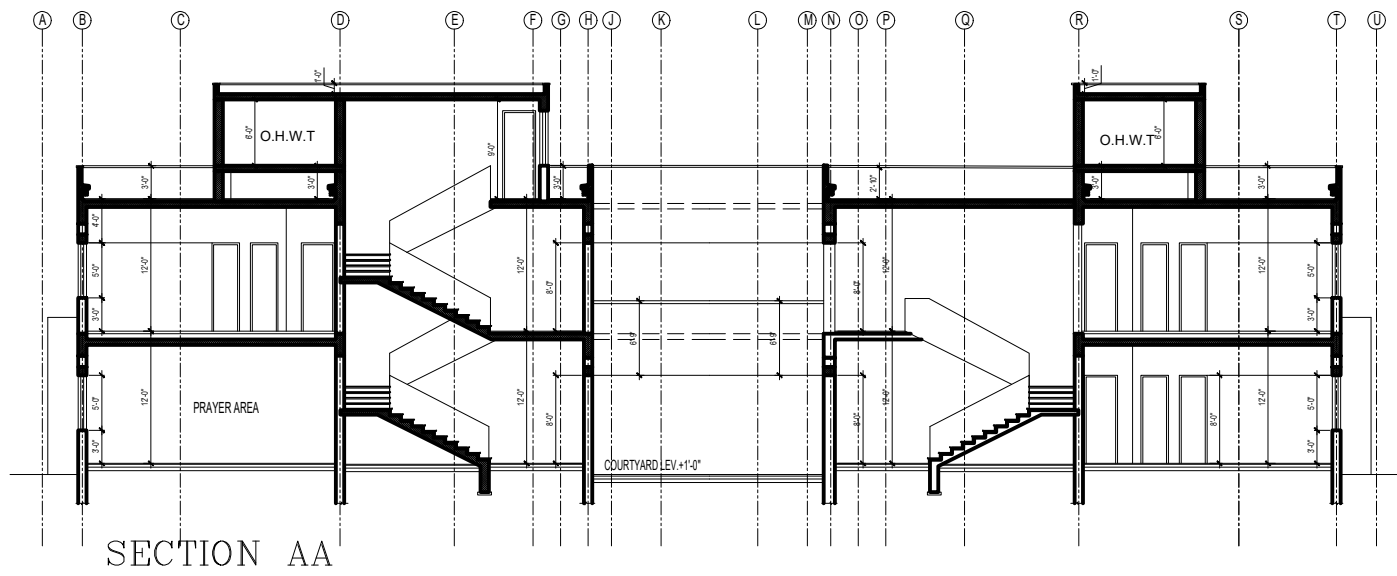
ELEVATION-1



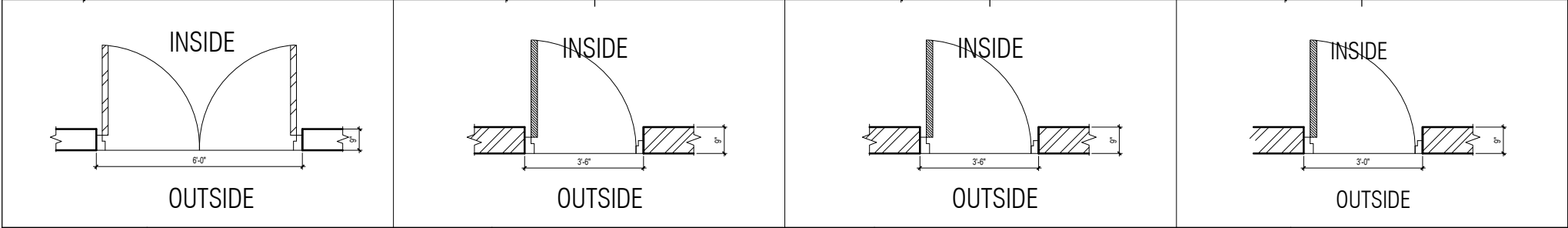
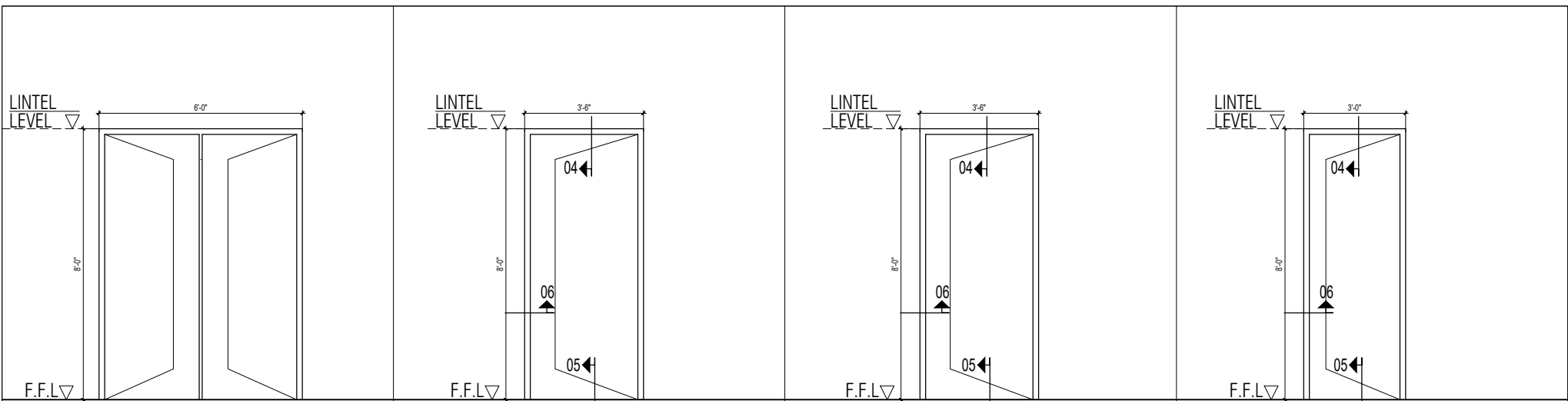
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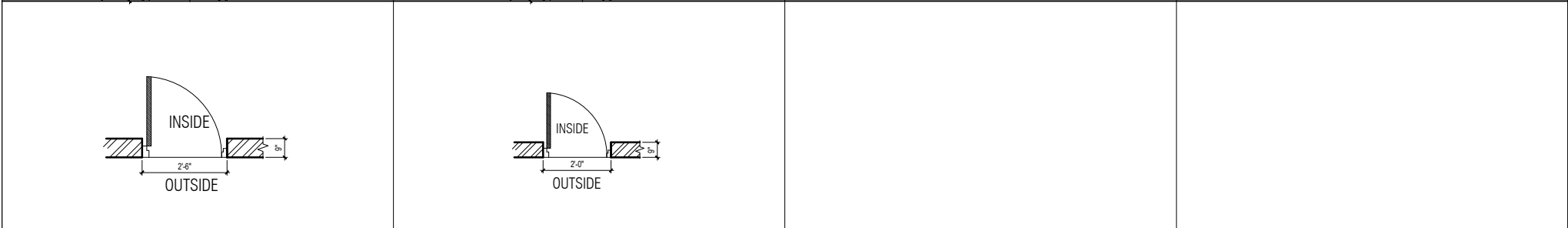
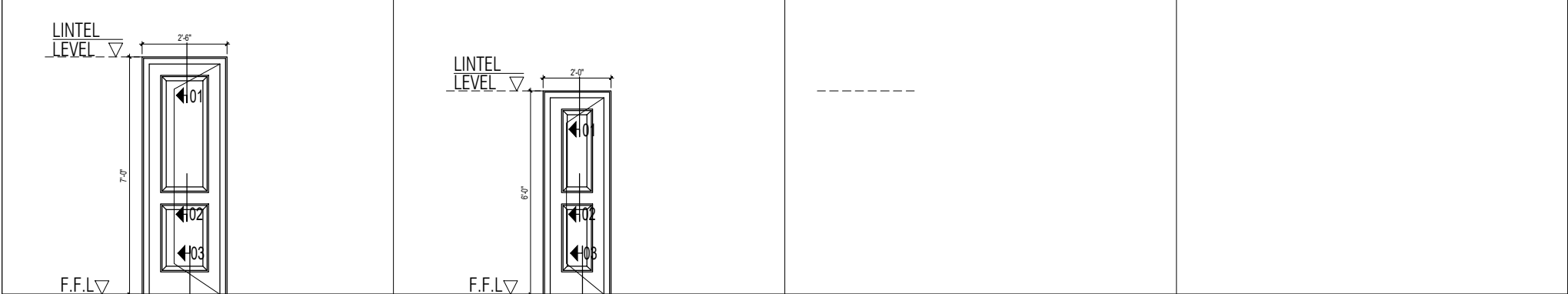
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PROJECT TITLE		SOFTWARE ENGINEERING DEPARTMENT			
DRAWING TITLE		ELEVATION 3, 4			
CONSULTANT ARCHITECT		PERSAZOJA MASROOR SADA SIDDIQI			
CONSULTANTS		NAOVI AND SIDDIQI			
GENERAL ENGINEERING SERVICES		NAOVI AND SIDDIQI			
ELECTRICAL ENGINEERING SERVICES		NAOVI AND SIDDIQI			
PLUMBING ENGINEERING SERVICES		NAOVI AND SIDDIQI			
MECHANICAL ENGINEERING SERVICES		NAOVI AND SIDDIQI			
PROJECT ARCHITECT		NAOVI AND SIDDIQI			
DATE					
SCALE					
DRAWING NO.		A-06			



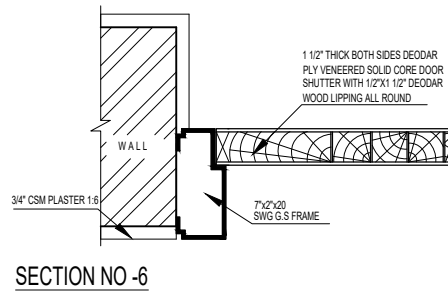
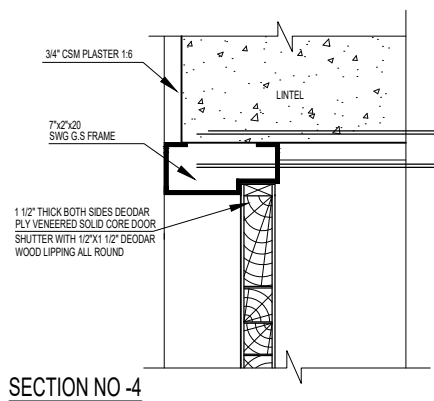
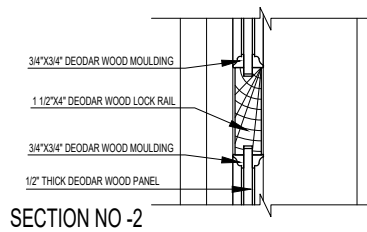
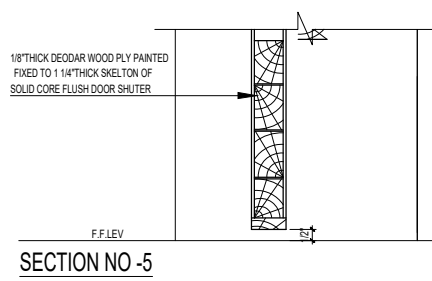
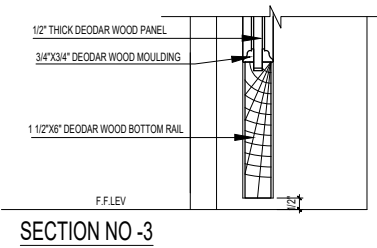
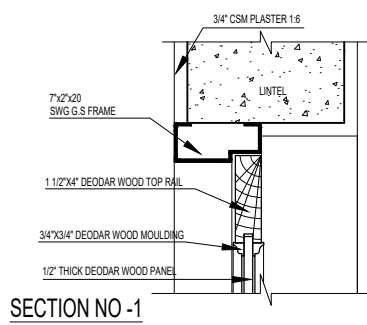
TENDER DRAWING	S.NO.	REVISION:	DATE:	KEY PLAN	PROJECT	PROJECT TITLE	DRAWING TITLE	RESIDENT ARCHITECT	CONSULTANTS	ELECTRICAL ENGINEER	PLUMBING ENGINEER	PROJECT ARCHITECT
					QUAID-E-AWAM UNIVERSITY OF ENGINEERING SCIENCES & TECHNOLOGY NAWABSHAH	Software Engineering Department	SECTION AA,BB	PERREZADA MASROOR RAZA SIDDIQUE	NAQVI AND SIDDIQUE DR. ABUSAYID A. NAQVI LOWER GROUND, 4th CENTRE, FIBRE OPTIC PLAZA OPP TO PARADISE POWER & ALIYAHAB FUND OFFICE, SECTOR 4, LILY AINAHAD, P.L.O. CHINA RD	NAQVI AND SIDDIQUE DR. ABUSAYID A. NAQVI LOWER GROUND, 4th CENTRE, FIBRE OPTIC PLAZA OPP TO PARADISE POWER & ALIYAHAB FUND OFFICE, SECTOR 4, LILY AINAHAD, P.L.O. CHINA RD	GLOBAL ENGINEERING SERVICES 100/101, 1st FLOOR, PHASE 2, CHINA SAH CIRCLE, KARACHI	GLOBAL ENGINEERING SERVICES 100/101, 1st FLOOR, PHASE 2, CHINA SAH CIRCLE, KARACHI



NAME	D1	NAME	D2	NAME	D3	NAME	D4
SIZE	6'-0"X8'-0"	SIZE	3'-6"X8'-0"	SIZE	3'-3"X8'-0"	SIZE	3'-0"X8'-0"
TYPE	DOUBLE LEAF HINGED	TYPE	DOUBLE LEAF HINGED	TYPE	DOUBLE LEAF HINGED	TYPE	DOUBLE LEAF HINGED



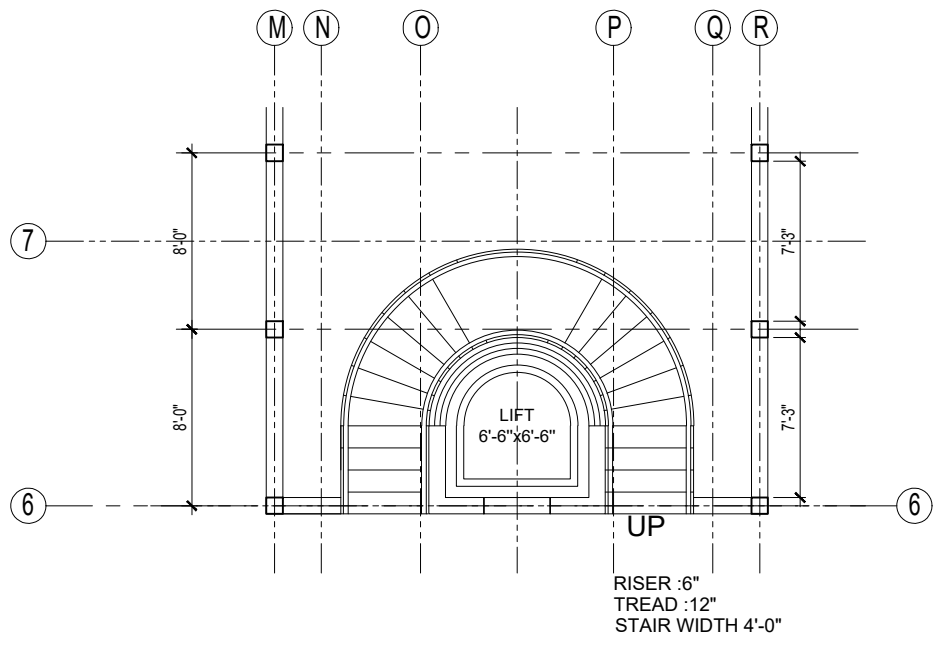
NAME	D5	NAME	D6
SIZE	2'-6"X7'-0"	SIZE	2'-0" X 7'-0"
TYPE	SINGLE LEAF HINGED	TYPE	SINGLE LEAF HINGED



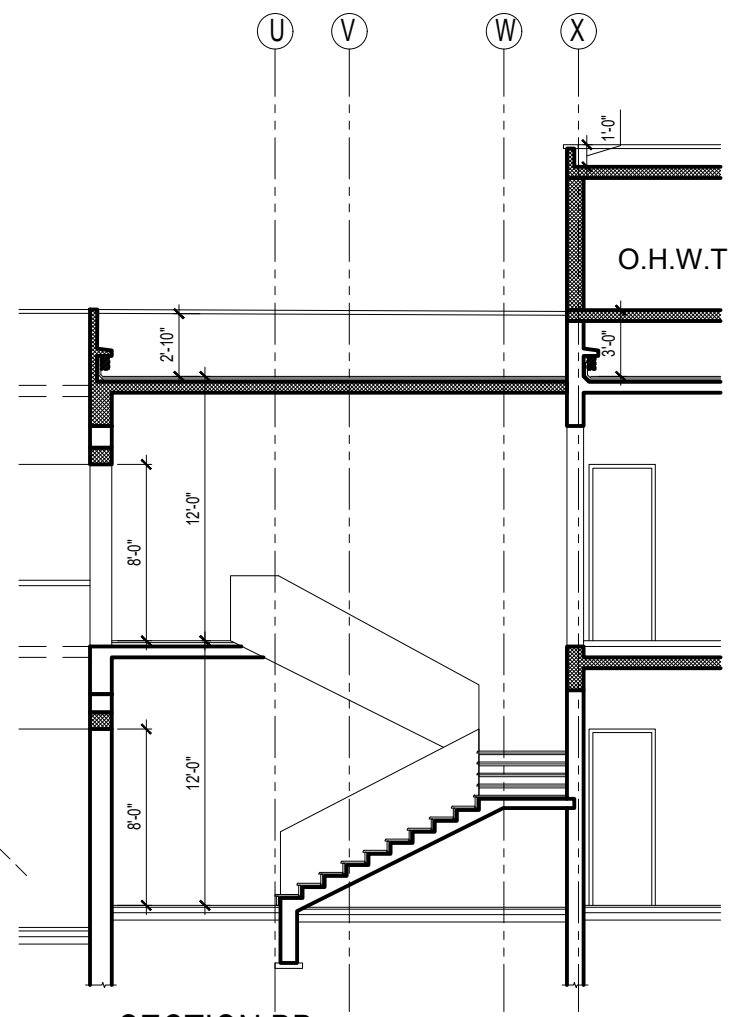






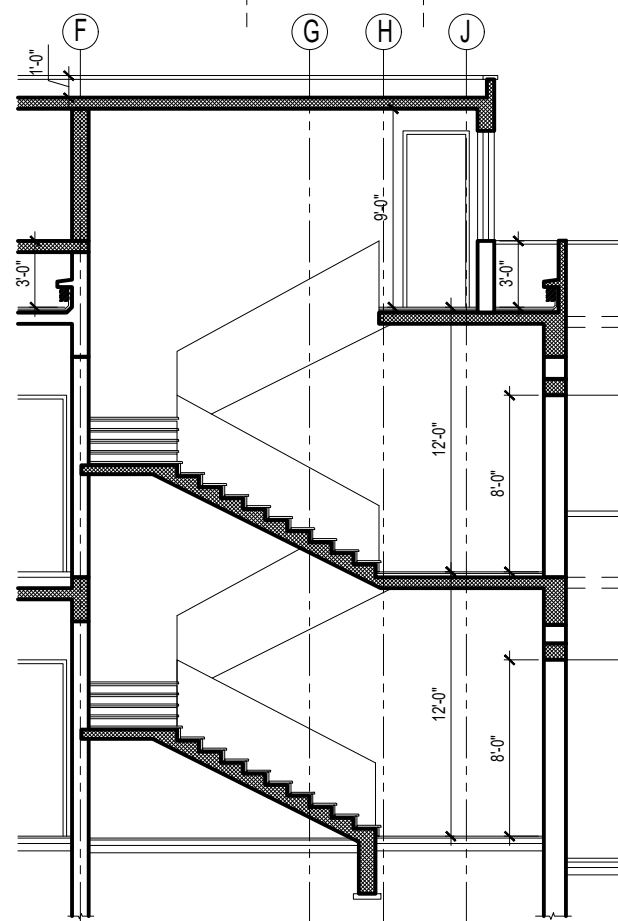


RISER :6"  
TREAD :12"  
STAIR WIDTH 4'-0"

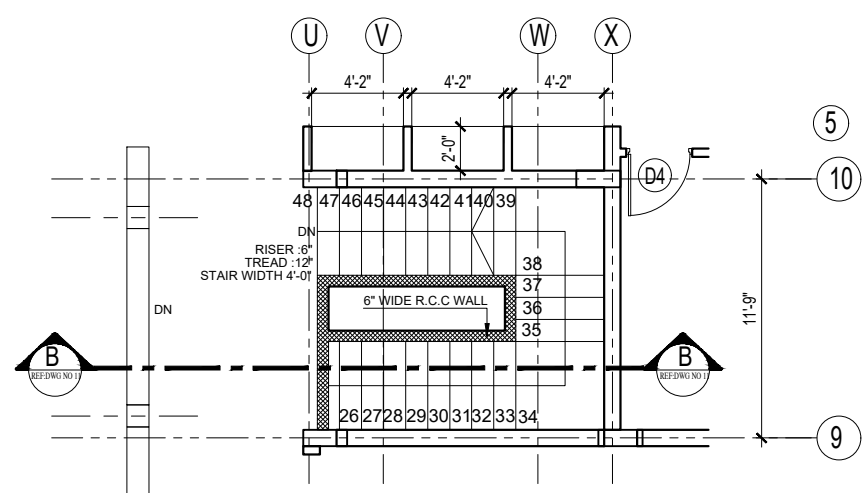


SECTION BB  
SCALE 1/4"=1'-0"

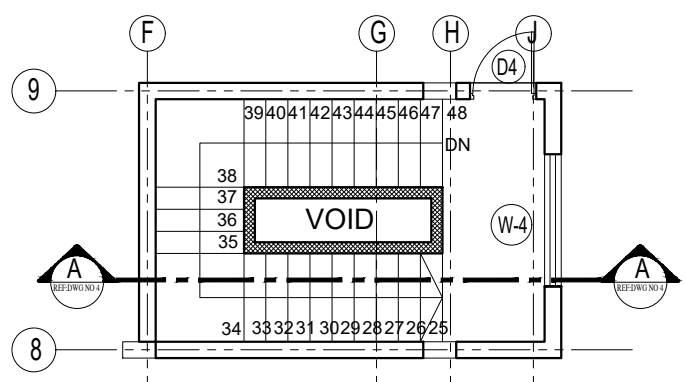
STAIR AND LIFT DETAIL GROUND FLOOR PLAN  
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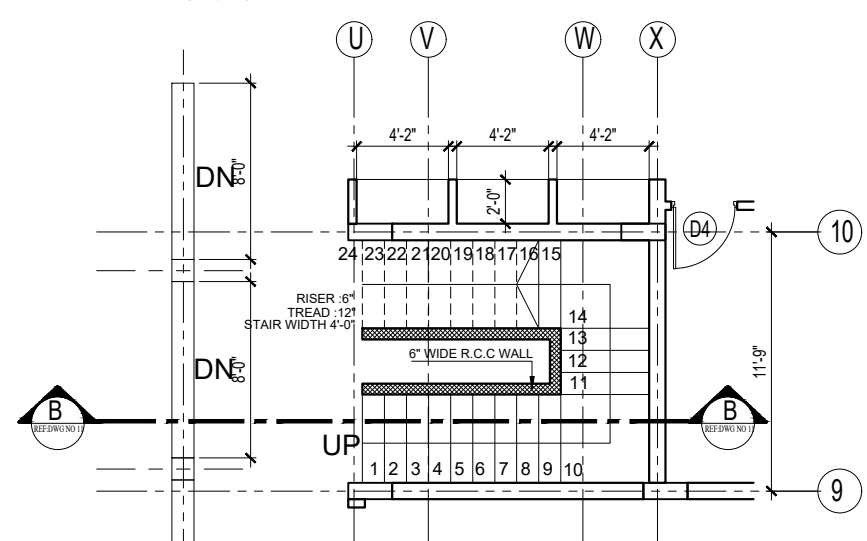
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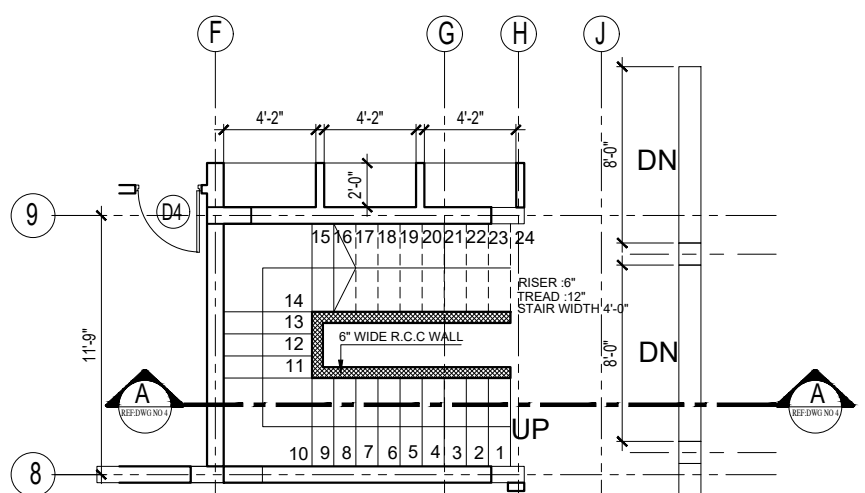
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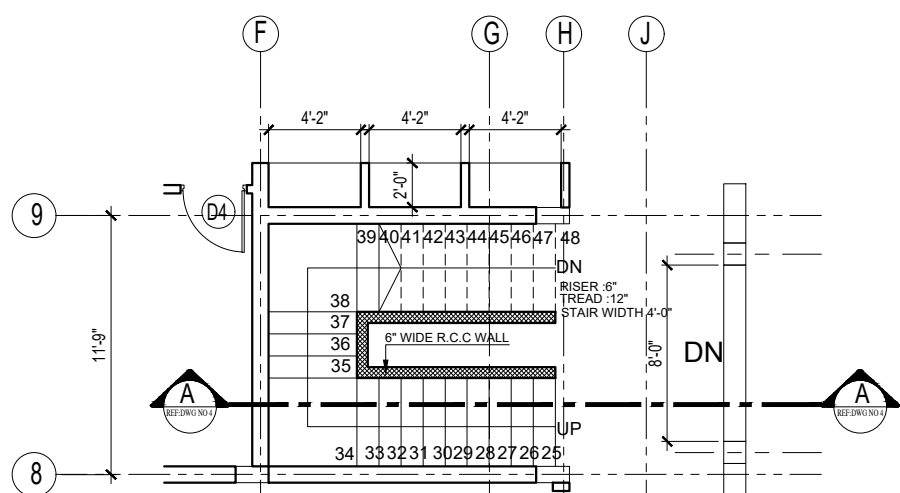
STAIR 01 MUMTY FLOOR PLAN  
SCALE 1/4"=1'-0"



STAIR 02 GROUND FLOOR PLAN  
SCALE 1/4"=1'-0"



STAIR 01 GROUND FLOOR PLAN  
SCALE 1/4"=1'-0"

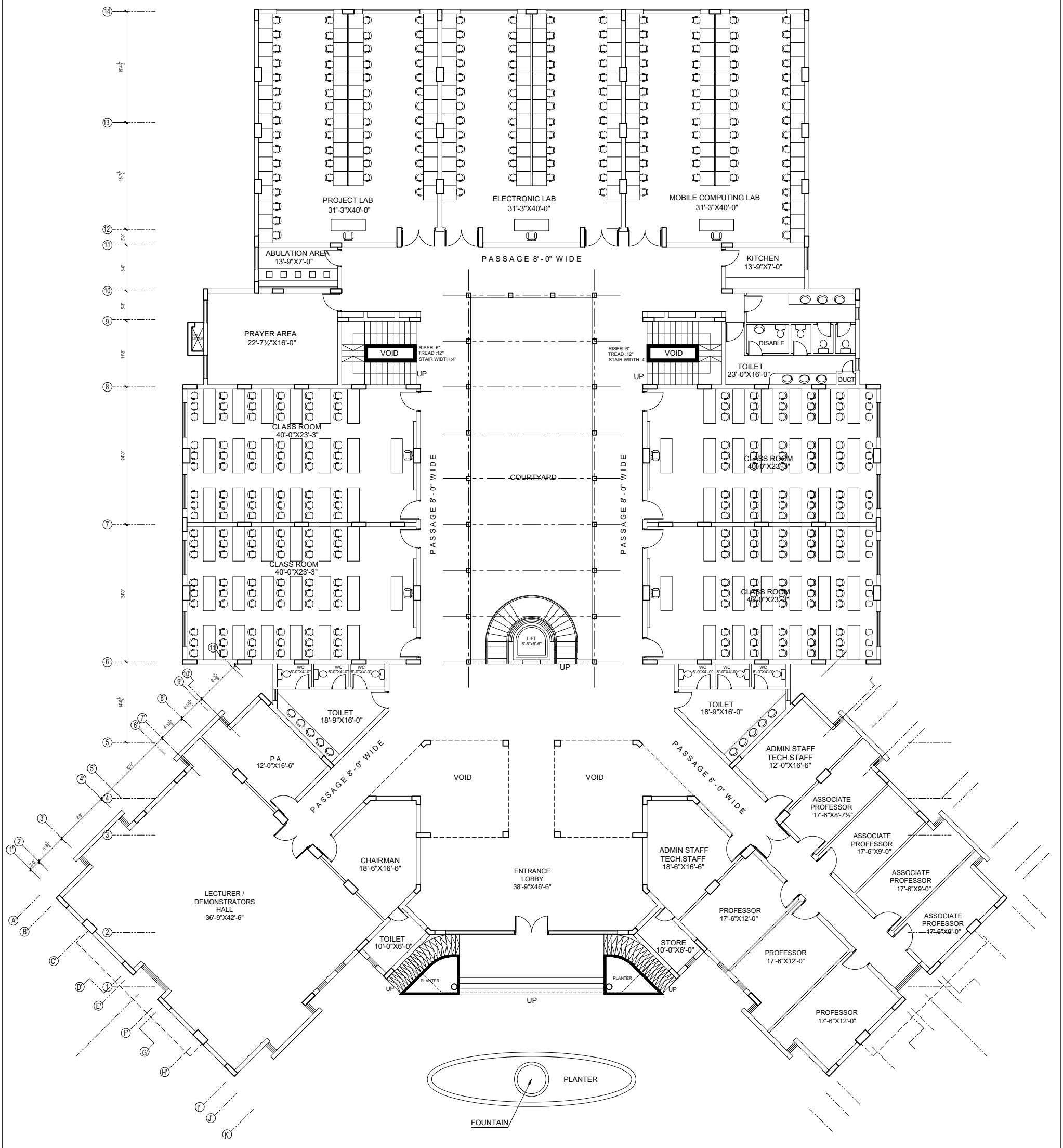


STAIR 01 FIRST FLOOR PLAN  
SCALE 1/4"=1'-0"

TENDER DRAWING	S.NO.	REVISION	DATE	KEY PLAN	PROJECT	PROJECT TITLE	DRAWING TITLE	RESIDENT ARCHITECT	CONSULTANTS	ELECTRICAL ENGINEER	PLUMBING ENGINEER	PROJECT ARCHITECT
					QUAID-E-AWAM UNIVERSITY OF ENGINEERING SCIENCES & TECHNOLOGY NAWABSHAH	Environmental Engineering Department	DETAIL OF STAIR	PERREZZA MASROOR RAZA SIDDIQUE	NAOVI AND SIDDIQUE P.L.C. ARCHITECT & ENGINEER LOWER GROUND - 8/1 CENTRE DIRECTOR GENERAL OFFICE TO PARAGAN DIRECTOR GENERAL OFFICE DIRECTOR GENERAL OFFICE P.L.C. ENGINEER	NAOVI AND SIDDIQUE P.L.C. ARCHITECT & ENGINEER LOWER GROUND - 8/1 CENTRE DIRECTOR GENERAL OFFICE TO PARAGAN DIRECTOR GENERAL OFFICE DIRECTOR GENERAL OFFICE P.L.C. ENGINEER	GLOBAL ENGINEERING SERVICES P.L.C. ARCHITECT & ENGINEER LOWER GROUND - 8/1 CENTRE DIRECTOR GENERAL OFFICE TO PARAGAN DIRECTOR GENERAL OFFICE DIRECTOR GENERAL OFFICE P.L.C. ENGINEER	GLOBAL ENGINEERING SERVICES P.L.C. ARCHITECT & ENGINEER LOWER GROUND - 8/1 CENTRE DIRECTOR GENERAL OFFICE TO PARAGAN DIRECTOR GENERAL OFFICE DIRECTOR GENERAL OFFICE P.L.C. ENGINEER
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CIL OF BUILDING

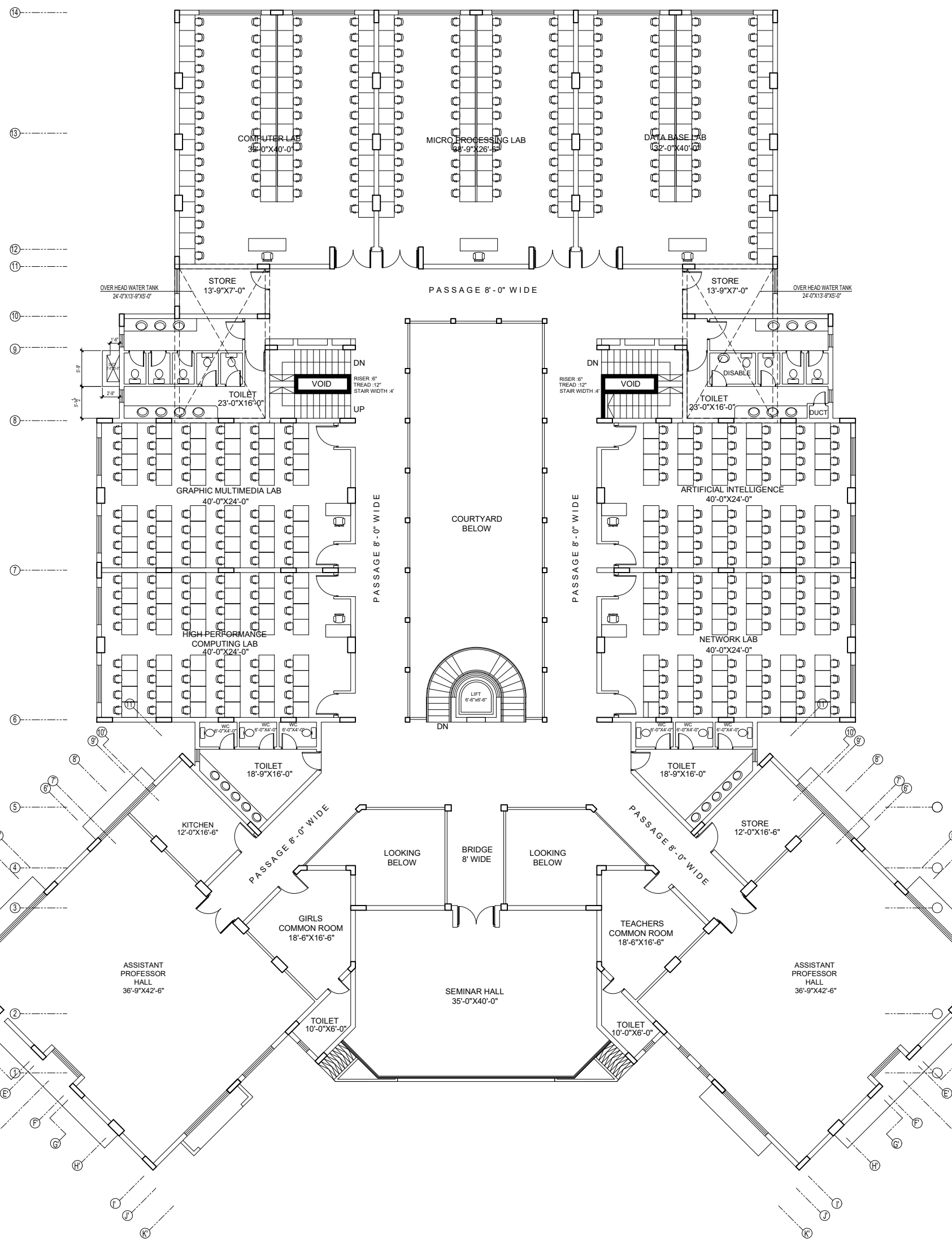
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TENDER DRAWING	S.NO.	REVISION:	DATE:	KEY PLAN	PROJECT	PROJECT TITLE	DRAWING TITLE	RESIDENT ARCHITECT	CONSULTANTS	ELECTRICAL ENGINEER	PLUMBING ENGINEER	PROJECT ARCHITECT
					QUAID-E-AWAM UNIVERSITY OF ENGINEERING SCIENCES & TECHNOLOGY NAWABSHAH	Software Engineering Department	GROUND FLOOR PLAN (FURNITURE LAYOUT)	PERZADA MASROOR RAZA SIDDIQUE	NAOVI AND SIDDIQUE P.O. BOX 12345, KARACHI DIRECTOR GENERAL, FEDERAL BUREAU OF INVESTIGATION DIRECTOR GENERAL, FEDERAL BUREAU OF INVESTIGATION DIRECTOR GENERAL, FEDERAL BUREAU OF INVESTIGATION	NAOVI AND SIDDIQUE P.O. BOX 12345, KARACHI DIRECTOR GENERAL, FEDERAL BUREAU OF INVESTIGATION DIRECTOR GENERAL, FEDERAL BUREAU OF INVESTIGATION DIRECTOR GENERAL, FEDERAL BUREAU OF INVESTIGATION	GLOBAL ENGINEERING SERVICES P.O. BOX 12345, KARACHI DIRECTOR GENERAL, FEDERAL BUREAU OF INVESTIGATION DIRECTOR GENERAL, FEDERAL BUREAU OF INVESTIGATION DIRECTOR GENERAL, FEDERAL BUREAU OF INVESTIGATION	GLOBAL ENGINEERING SERVICES P.O. BOX 12345, KARACHI DIRECTOR GENERAL, FEDERAL BUREAU OF INVESTIGATION DIRECTOR GENERAL, FEDERAL BUREAU OF INVESTIGATION DIRECTOR GENERAL, FEDERAL BUREAU OF INVESTIGATION
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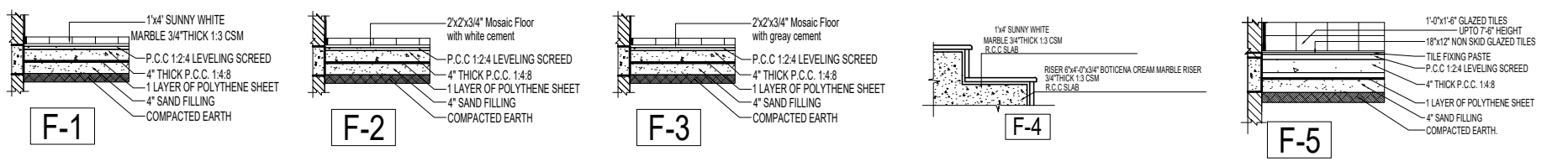
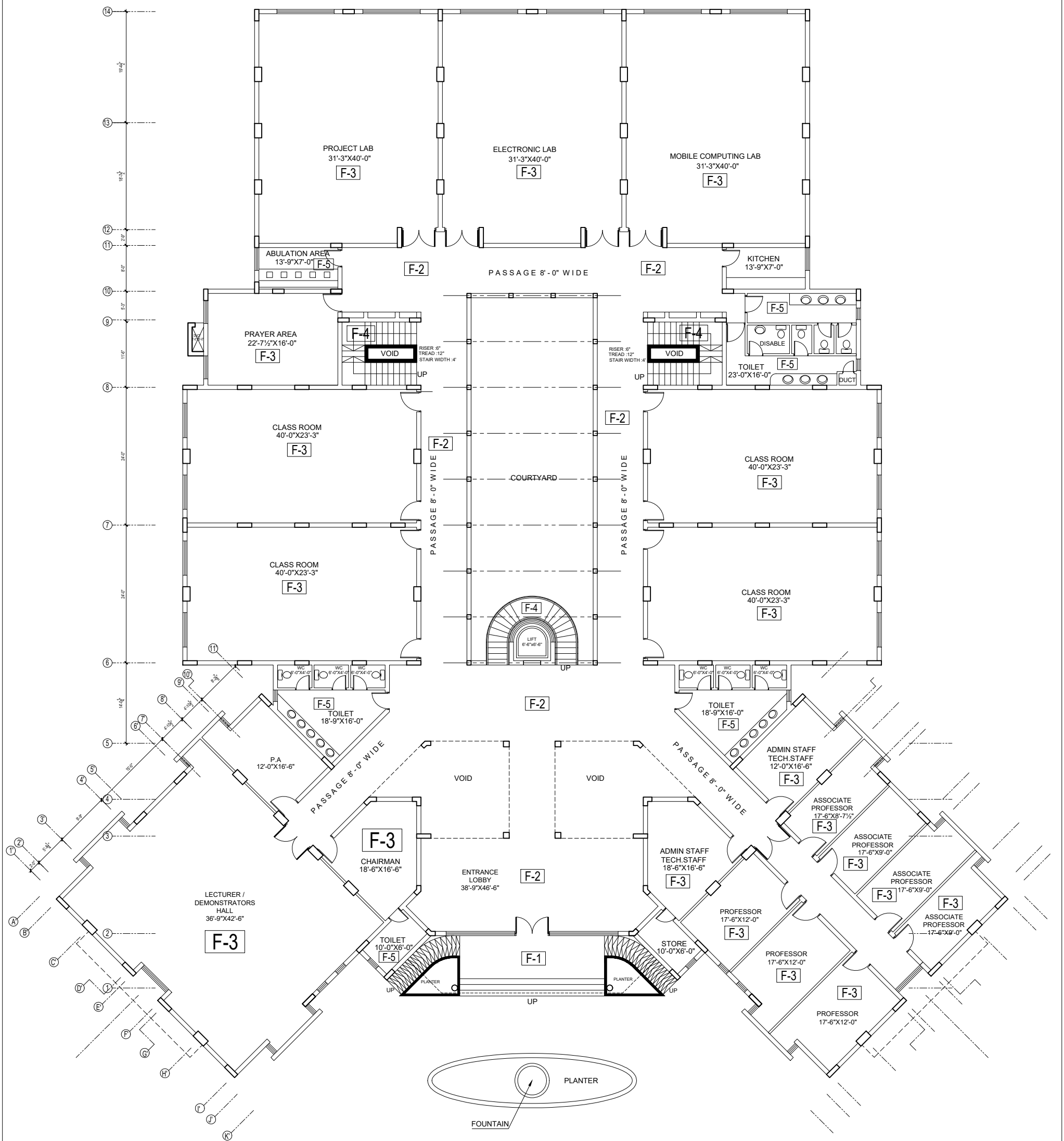
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					QUAID-E-AWAM UNIVERSITY OF ENGINEERING SCIENCES & TECHNOLOGY NAWABSHAH	Software Engineering Department	FIRST FLOOR PLAN (FURNITURE LAYOUT)	PERREZADA MASROOR RAZA SIDDIQUE	NAOVI AND SIDDIQUE P.O. BOX 12345 LOWER GROUND - 1ST CENTRE DIREKTOR ALYAKHBER HUND OFFICE, SECTOR 14/11, ISLAMABAD TEL: 35720010	NAOVI AND SIDDIQUE P.O. BOX 12345 LOWER GROUND - 1ST CENTRE DIREKTOR ALYAKHBER HUND OFFICE, SECTOR 14/11, ISLAMABAD TEL: 35720010	GLOBAL ENGINEERING SERVICES P.O. BOX 12345 LOWER GROUND - 1ST CENTRE DIREKTOR ALYAKHBER HUND OFFICE, SECTOR 14/11, ISLAMABAD TEL: 35720010	GLOBAL ENGINEERING SERVICES P.O. BOX 12345 LOWER GROUND - 1ST CENTRE DIREKTOR ALYAKHBER HUND OFFICE, SECTOR 14/11, ISLAMABAD TEL: 35720010
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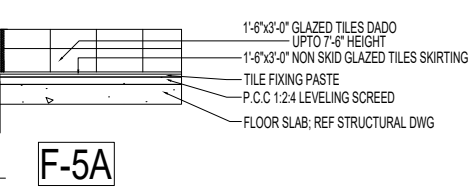
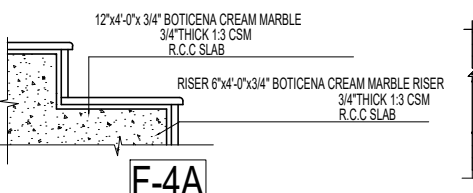
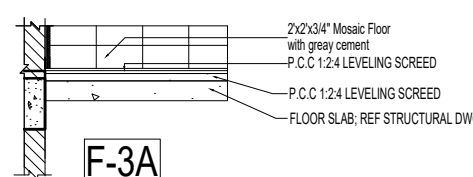
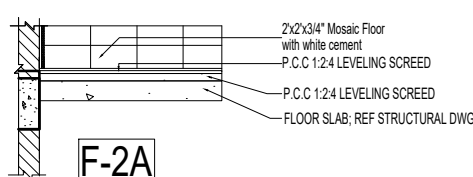
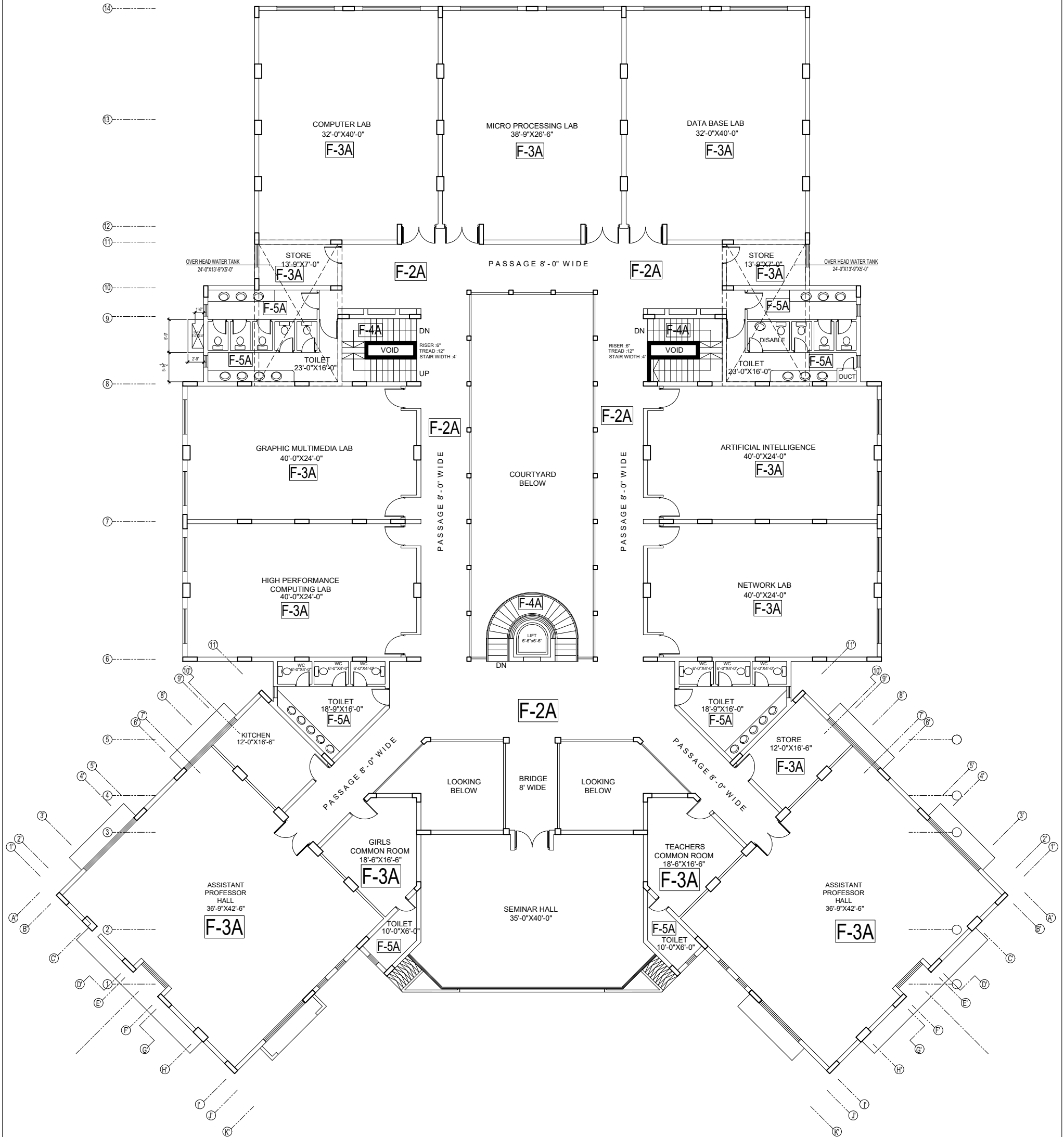
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					QUAID-E-AWAM UNIVERSITY OF ENGINEERING SCIENCES & TECHNOLOGY NAWABSHAH	Software Engineering Department	GROUND FLOOR PLAN (FLOOR FINISHES)	PERREZADA MASROOR RAZA SIDDIQUE	NAOVI AND SIDDIQUE P.L.O. & ARCHITECT LOWER GROUND - 4TH CENTRE DIREKTOR AL-KHAYMAH (BY) PAKISTAN DIKTOR LAILI ANSAR P.L.O. & ARCHITECT	NAOVI AND SIDDIQUE P.L.O. & ARCHITECT LOWER GROUND - 4TH CENTRE DIREKTOR AL-KHAYMAH (BY) PAKISTAN DIKTOR LAILI ANSAR P.L.O. & ARCHITECT	GLOBAL ENGINEERING SERVICES P.L.O. & ARCHITECT LOWER GROUND - 4TH CENTRE DIREKTOR AL-KHAYMAH (BY) PAKISTAN DIKTOR LAILI ANSAR P.L.O. & ARCHITECT	GLOBAL ENGINEERING SERVICES P.L.O. & ARCHITECT LOWER GROUND - 4TH CENTRE DIREKTOR AL-KHAYMAH (BY) PAKISTAN DIKTOR LAILI ANSAR P.L.O. & ARCHITECT
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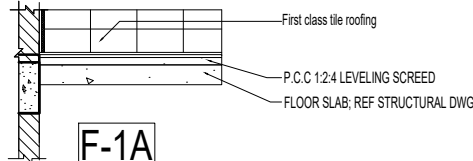
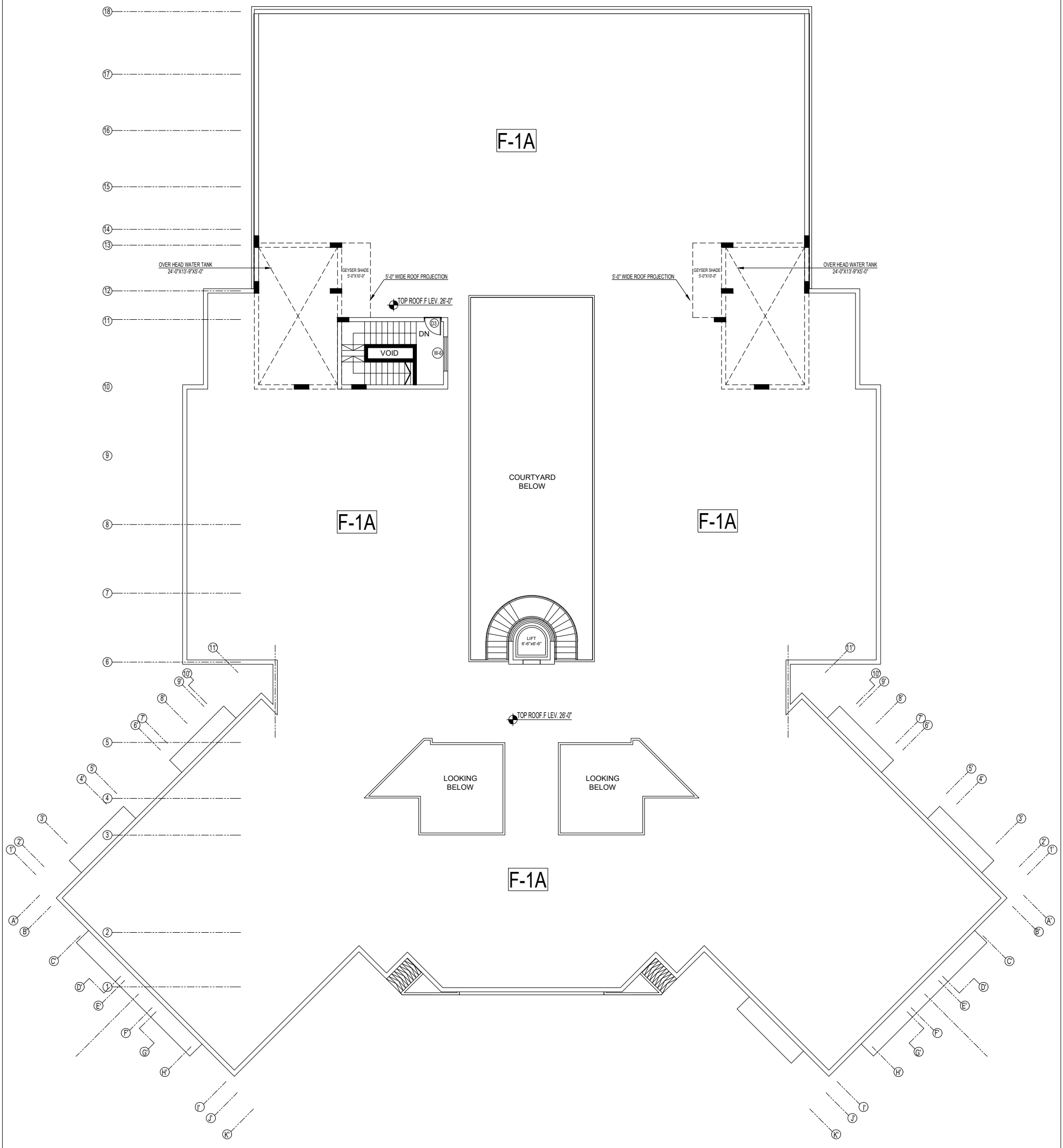
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					QUAID-E-AWAM UNIVERSITY OF ENGINEERING SCIENCES & TECHNOLOGY NAWABSHAH	Software Engineering Department	FIRST FLOOR PLAN (FLOOR FINISHES)	PERREZADA MASROOR RAZA SIDDIQUE	NAQVI AND SIDDIQUE P.L.O. & ARCHITECT LOWER GROUND - 4TH CENTRE DIRECTOR GENERAL BUILDING AUTHORITY DIRECTOR GENERAL BUILDING AUTHORITY DIRECTOR GENERAL BUILDING AUTHORITY P.L.O. & ARCHITECT	NAQVI AND SIDDIQUE P.L.O. & ARCHITECT LOWER GROUND - 4TH CENTRE DIRECTOR GENERAL BUILDING AUTHORITY DIRECTOR GENERAL BUILDING AUTHORITY DIRECTOR GENERAL BUILDING AUTHORITY P.L.O. & ARCHITECT	GLOBAL ENGINEERING SERVICES P.L.O. & ARCHITECT LOWER GROUND - 4TH CENTRE DIRECTOR GENERAL BUILDING AUTHORITY DIRECTOR GENERAL BUILDING AUTHORITY DIRECTOR GENERAL BUILDING AUTHORITY P.L.O. & ARCHITECT	GLOBAL ENGINEERING SERVICES P.L.O. & ARCHITECT LOWER GROUND - 4TH CENTRE DIRECTOR GENERAL BUILDING AUTHORITY DIRECTOR GENERAL BUILDING AUTHORITY DIRECTOR GENERAL BUILDING AUTHORITY P.L.O. & ARCHITECT	A-15

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TENDER DRAWING	S.NO.	REVISION:	DATE:	KEY PLAN	PROJECT	PROJECT TITLE	DRAWING TITLE	RESIDENT ARCHITECT	CONSULTANTS	ELECTRICAL ENGINEER	PLUMBING ENGINEER	DATE	DRAWING NO.
					QUAID-E-AWAM UNIVERSITY OF ENGINEERING SCIENCES & TECHNOLOGY NAWABSHAH	Software Engineering Department	ROOF PLAN	FERRAZADA MASROOR RAZA SIDDIQUE	NAOVI AND SIDDIQUE P.L.O. SUBJECT ENGINEER LOWER GROUND - IRT CENTRE DIRECTOR GENERAL OFFICE TO PAKISTAN SECTOR 11/11/1, ISLAMABAD TEL: 35220000	NAOVI AND SIDDIQUE P.L.O. SUBJECT ENGINEER LOWER GROUND - IRT CENTRE DIRECTOR GENERAL OFFICE TO PAKISTAN SECTOR 11/11/1, ISLAMABAD TEL: 35220000	GLOBAL ENGINEERING SERVICES P.L.O. SUBJECT ENGINEER LOWER GROUND - IRT CENTRE DIRECTOR GENERAL OFFICE TO PAKISTAN SECTOR 11/11/1, ISLAMABAD TEL: 35220000	GLOBAL ENGINEERING SERVICES P.L.O. SUBJECT ENGINEER LOWER GROUND - IRT CENTRE DIRECTOR GENERAL OFFICE TO PAKISTAN SECTOR 11/11/1, ISLAMABAD TEL: 35220000	SCALE: 1/4"=1'-0" DRAWN BY: M. SIDDIQ CHECKED BY:

# GROUND FLOOR PLAN

DESCRIPTION	FLOOR	SKIRTING	DADO	FALSE CEILING	INTERNAL PAINT	EXTERNAL PAINT
ENTRANCE STEPS	1x4' SUNNY WHITE MARBLE 3/4" THICK 1:3 CSM	---	---	---	WEATHER SHIELD	WEATHER SHIELD
ENTRANCE LOBBY	15mm THICK TERRAZZO FLOOR IN WHITE CEMENT LAID IN 2'-0"x4'-0" PANELS USING SUNNY WHITE MARBLE DIVIDING STRIP	4"x2"x 3/4" BOTICENA FLOWER MARBLE 3/4" THICK 1:3 CSM	---	---	WEATHER SHIELD	----DO----
PASSAGE	15mm THICK TERRAZZO FLOOR IN WHITE CEMENT LAID IN 2'-0"x4'-0" PANELS USING SUNNY WHITE MARBLE DIVIDING STRIP	----DO----	---	---	PLASTIC EMULSION	----DO----
LECTURER/ DEMONSTRATORS	15mm THICK TERRAZZO FLOOR IN GREY CEMENT LAID IN 2'-0"x4'-0" PANELS USING SUNNY WHITE MARBLE DIVIDING STRIP	----DO----	---	---	PLASTIC EMULSION	----DO----
ASSOCIATE PROFESSOR	15mm THICK TERRAZZO FLOOR IN GREY CEMENT LAID IN 2'-0"x4'-0" PANELS USING SUNNY WHITE MARBLE DIVIDING STRIP	----DO----	---	---	PLASTIC EMULSION	----DO----
CHAIRMAN	15mm THICK TERRAZZO FLOOR IN GREY CEMENT LAID IN 2'-0"x4'-0" PANELS USING SUNNY WHITE MARBLE DIVIDING STRIP	----DO----	---	---	PLASTIC EMULSION	----DO----
P.A	15mm THICK TERRAZZO FLOOR IN GREY CEMENT LAID IN 2'-0"x4'-0" PANELS USING SUNNY WHITE MARBLE DIVIDING STRIP	----DO----	---	---	PLASTIC EMULSION	----DO----
ADMIN STAFF TECH. STAFF	15mm THICK TERRAZZO FLOOR IN GREY CEMENT LAID IN 2'-0"x4'-0" PANELS USING SUNNY WHITE MARBLE DIVIDING STRIP	----DO----	---	---	PLASTIC EMULSION	----DO----
PROFESSOR	15mm THICK TERRAZZO FLOOR IN GREY CEMENT LAID IN 2'-0"x4'-0" PANELS USING SUNNY WHITE MARBLE DIVIDING STRIP	----DO----	---	---	PLASTIC EMULSION	----DO----
CLASS ROOM	15mm THICK TERRAZZO FLOOR IN GREY CEMENT LAID IN 2'-0"x4'-0" PANELS USING SUNNY WHITE MARBLE DIVIDING STRIP	----DO----	---	---	PLASTIC EMULSION	----DO----
PROJECT LAB	15mm THICK TERRAZZO FLOOR IN GREY CEMENT LAID IN 2'-0"x4'-0" PANELS USING SUNNY WHITE MARBLE DIVIDING STRIP	----DO----	---	---	PLASTIC EMULSION	----DO----
ELECTRONIC LAB	15mm THICK TERRAZZO FLOOR IN GREY CEMENT LAID IN 2'-0"x4'-0" PANELS USING SUNNY WHITE MARBLE DIVIDING STRIP	----DO----	---	---	PLASTIC EMULSION	----DO----
MOBILE COMPUTING LAB	15mm THICK TERRAZZO FLOOR IN GREY CEMENT LAID IN 2'-0"x4'-0" PANELS USING SUNNY WHITE MARBLE DIVIDING STRIP	----DO----	---	---	PLASTIC EMULSION	----DO----
ABLUTION AREA	1'-0"x1'-6" NON SKID PORCELAIN TILES	----DO----	---	---	PLASTIC EMULSION	----DO----
KITCHEN	1'-0"x1'-6" NON SKID PORCELAIN TILES	---	---	---	PLASTIC EMULSION	----DO----
STAIR	1x4' SUNNY WHITE MARBLE 3/4" THICK 1:3 CSM	---	---	---	PLASTIC EMULSION	----DO----
TOILET	1'-0"x1'-6" NON SKID PORCELAIN TILES	---	1'-0"x1'-6" PORCELAIN TILES	---	ENAMEL	----DO----

# FIRST FLOOR PLAN

DESCRIPTION	FLOOR	SKIRTING	DADO	FALSE CEILING	INTERNAL PAINT	EXTERNAL PAINT
ASSISTANT PROFESSOR	15mm THICK TERRAZZO FLOOR IN GREY CEMENT LAID IN 2'-0"x4'-0" PANELS USING SUNNY WHITE MARBLE DIVIDING STRIP	4" WIDE MARBLE SKIRTING	---	---	PLASTIC EMULSION	----DO----
BRIDGE	----DO----	----DO----	---	---	PLASTIC EMULSION	----DO----
GIRLS COMMON ROOM	----DO----	----DO----	---	---	PLASTIC EMULSION	----DO----
PROFESSOR	----DO----	----DO----	---	---	PLASTIC EMULSION	----DO----
STORE	----DO----	----DO----	---	---	PLASTIC EMULSION	----DO----
GIRLS COMMON ROOM	----DO----	----DO----	---	---	PLASTIC EMULSION	----DO----
TEACHERS COMMON ROOM	----DO----	----DO----	---	---	PLASTIC EMULSION	----DO----
ARTIFICIAL INTELLIGENCE	----DO----	----DO----	---	---	PLASTIC EMULSION	----DO----
NETWORK LAB	----DO----	----DO----	---	---	PLASTIC EMULSION	----DO----
HIGH PERFORMANCE COMPUTING LAB	----DO----	----DO----	---	---	PLASTIC EMULSION	----DO----
GRAPHIC MULTIMEDIA LAB	----DO----	----DO----	---	---	PLASTIC EMULSION	----DO----
DATA BASE LAB	----DO----	----DO----	---	---	PLASTIC EMULSION	----DO----
MICRO PROCESSING LAB	----DO----	----DO----	---	---	PLASTIC EMULSION	----DO----
COMPUTER LAB	----DO----	----DO----	---	---	PLASTIC EMULSION	----DO----
P A S S A G E	15mm THICK TERRAZZO FLOOR IN WHITE CEMENT LAID IN 2'-0"x4'-0" PANELS USING SUNNY WHITE MARBLE DIVIDING STRIP	----DO----	---	---	PLASTIC EMULSION	----DO----
KITCHEN	1'-0"x1'-6" NON SKID PORCELAIN TILES	---	---	---	PLASTIC EMULSION	----DO----
STAIR	1x4' SUNNY WHITE MARBLE 3/4" THICK 1:3 CSM	---	---	---	PLASTIC EMULSION	----DO----
TOILET	1'-0"x1'-6" NON SKID PORCELAIN TILES	---	---	---	ENAMEL PAINT	----DO----



**QUAID-E-AWAM**  
UNIVERSITY OF ENGINEERING  
SCIENCES & TECHNOLOGY  
NAWABSHAH

**SOFTWARE**  
**ENGINEERING DEPARTMENT**

**STRUCTURAL DRAWINGS**  
(TENDER DRAWING)

CLIENT:  
**QUEST NAWABSHAH**

ARCHITECTS:  
**NAQVI AND SIDDIQUIE**  
INC. ARCHITECTS & ENGINEERS  
LOWER GROUND FLOOR,  
I&T CENTER, PLOT NO: 61,  
STREET 14, SECTOR G-8/1,  
ISLAMABAD.



STRUCTURE:  
**GLOBAL ENGINEERING SERVICES**  
CONSULTING CIVIL & STRUCTURAL ENGINEERS  
HOUSE # NE 122/F, STREET 7,  
CHAMAN ZAR COLONY, RAWALPINDI

**QUAID-E-AWAM**  
**UNIVERSITY OF ENGINEERING**  
**SCIENCES & TECHNOLOGY**  
**NAWABSHAH**  
**SOFTWARE**  
**ENGINEERING DEPARTMENT**

**LIST OF DRAWINGS**

ST-001,ST-002	BRIEF SPECIFICATIONS, CONSTRUCTION PROCEDURE & TYPICAL STRUCTURAL DETAILS
S-01	GENERAL TECHNICAL NOTES & SCHEDULE OF LINTELS
S-02	SCHEDULE OF FOOTINGS & COLUMNS
S-03 TO S-5	GROUND FLOOR ,FIRST FLOOR & ROOF COLUMN LAYOUT PLAN
S-06	FOOTING PLAN
S-07 TO S-09	TYPICAL DETAILS FOR FOOTINGS, COLUMNS & STAIR
S-10	FRAMING PLAN FOR FIRST FLOOR SLAB (GROUND FLOOR ROOF)
S-11	REINFORCEMENT PLAN FOR FIRST FLOOR SLAB (GROUND FLOOR ROOF)
S-12	FRAMING PLAN FOR ROOF SLAB (FIRST FLOOR ROOF)
S-13	REINFORCEMENT PLAN FOR ROOF SLAB (FIRST FLOOR ROOF)
S-14	FRAMING PLAN FOR MUMTY SLAB
S-15	REINFORCEMENT PLAN FOR MUMTY SLAB
S-16 TO S-17	SECTION A-A & PARAPET DETAILS
S-18 TO S-23	L-SECTION OF BEAMS
S-24	O.H WATER TANK DETAIL

**TYPICAL STRUCTURAL DETAILS AND BRIEF CONSTRUCTION PROCEDURE**

**1. EXCAVATION**

- a. All drawings such as Architectural , Structural , Electrical , Mechanical , Water supply , Sewerage and drainage etc. should be collected and studied before starting layout , excavation or any other construction activity. Any ambiguity or contradiction in the drawings should be brought to the notice of Architect & Engineer.
- b. All excavation work should be done strictly according to drawings, keeping in view necessary working space required for form work etc.
- c. All excavation work should be brought to its finish level without disturbing the bottom soil of trenches. Any excavation done below the foundation level, will have to be replaced by lean concrete.

**2. FOOTINGS.**

All footings will be placed at required level, as indicated on drawings. All footings reinforcement details should be studied thoroughly before preparing bar bending schedule and proceeding with fabrication of steel reinforcement. All footings slabs will be provided with top & bottom reinforcement. The quantity of steel provided shall not be less than the absolute minimum specified in ACI Code 318R-05. All steel reinforcement will be provided with 90° L-hooks of suitable length at discontinuous ends, and proper concrete cover at top , bottom and sides. (For details see Fig-1)

**3. TIE BEAMS.**

Tie beams are provided at footing or plinth level. Their proper connection with footing and column is of great structural significance. The joint details should be studied thoroughly before preparing bar bending schedule and proceeding with fabrication of steel reinforcement. Tie beams will be provided with close spaced stirrups near ends and additional hoop or spiral reinforcement at lap points for a distance equal to lap length of bars. The spacing of hoop or spiral reinforcement should not be more than 4". All reinforcement will be provided concrete cover at top, bottom & sides.

**4. COLUMNS.**

All columns will be placed at correct location, keeping in view their levels and alignment. All columns reinforcement details, should be studied thoroughly before preparing bar bending schedule and proceeding with fabrication of steel reinforcement. All columns bars are to be provided with 90° L-hook of suitable length at bottom (column starting point) and top (column end point). Column bars will be lapped at each floor, at its mid height, slightly below and above, by ensuring staggered laps. Distance between stagger may be kept as 24" (minimum). All columns will be provided with hoop or spiral reinforcement at lap points for a distance equal to lap length of bars. The spacing of hoop or spiral reinforcement should not be more than 4".

At lap points, bottom (lower) bars will be joggled gradually. The joggle length should not be less than 12".

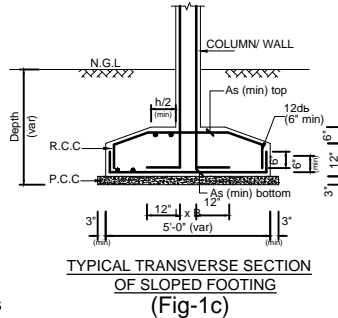
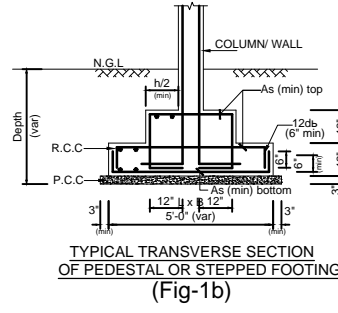
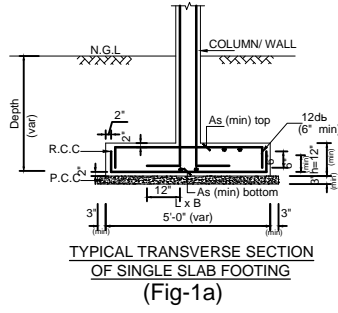
All columns will be provided with closed spaced ties at top and bottom ends. Column ties will also be provided within beam length intersecting the column. All columns will be provided with cover blocks of suitable size on its sides. (For details see Fig-2)

**5. BEAMS.**

All beams will be placed at correct location and level. All beams reinforcement details should be studied thoroughly before preparing bar bend schedule and proceeding with fabrication of steel reinforcement.

All beams top and bottom bars are to be provided with 90° L-hooks of suitable length at discontinuous ends. Beam bars could be lapped at 1/4-1/3 span length. Only 50% bars should be lapped at one point while other 50% bars at opposite position of the span or at least 24" away from the first lap point. All beams will be provided with additional hoop or spiral reinforcement at lap points for a distance equal to lap length of bars. The spacing of hoop or spiral reinforcement should not be more than 4". At lap points bars should be joggled gradually. The joggled length should not be less than 12".

All beams will be provided with close spaced stirrup near supports. Beam stirrups will also be provided within column length intersecting beams. All beams will be provided with cover blocks of suitable size at bottom and sides. (For details see Fig-3)



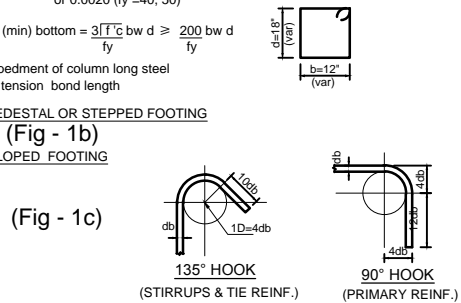
**BRIEF SPECIFICATIONS FOR FOOTING REINFORCEMENT**  
(Section 12.15.21 ACI Code 318R-05)

1) SINGLE SLAB FOOTING (Fig - 1a)  
Minimum thickness,  $h = 6" + 2d_b + 2"$  for 1/2" dia bars  
 $h = 6" + 2 \times 0.5 + 2" = 11"$  take 12"  
 $A_s$  (min) top =  $0.0018 (f_y = 60)$  or  $0.0020 (f_y = 40, 50)$   
 $A_s$  (min) bottom =  $\frac{3\sqrt{f'_c} b w d}{f_y} \geq \frac{200 b w d}{f_y}$   
embedment of column long steel full tension bond length

2) PEDESTAL OR STEPPED FOOTING (Fig - 1b)

3) SLOPED FOOTING (Fig - 1c)

**TIE BEAM**  
(Section 21.10.3 ACI Code 318R-05)  
Maximum depth or width =  $\frac{h_n}{20}$   $\downarrow$  18"  
Ties Spacing  $1/2 b$  or  $1/2 d$  or 12" which ever is smaller



**BRIEF SPECIFICATION FOR BEAM REINFORCEMENT**  
(Section 10.11, 12.21 ACI Code 318R-05)

Se (spacing at ends upto 2h)  
i) d/4  
ii) 8  $d_b$  (smallest long bar)  
iii) 24  $d_b$  (hoop bar)  
iv) 12"

Sm (spacing at mid portion  $\frac{h_n}{4}$ )  
 $A_v = 0.75 f'_c \frac{b w s}{f_y} \geq 50 \frac{b w s}{f_y}$

$S_{max} = \frac{A_v f_y}{0.75 f'_c b w} \leq \frac{A_v f_y}{50 b w}$   
or  $S_{max} = d/2$   
or  $S_{max} = 24"$

Lap for tension bars  
 $l_d = \frac{f_y d_b}{25 f'_c}$  for #6 & smaller bars  
 $l_d = \frac{f_y d_b}{20 f'_c}$  for #7 & longer bars  
nor less than 12"  
 $l_{dh} = f_y d_b / (65 \sqrt{f'_c})$   
(hooked bar) 8d, 6"  
with hoop steel  
 $s = d/4$  or 4"

Minimum beam width (section 21.3 ACI Code 318R-05)  
 $b_w > 10"$   
 $b_w > 0.3 h$   
 $b_w \geq$  that width of supporting member

Steel Reinforcement  
 $A_s$  (min) bottom =  $\frac{3\sqrt{f'_c} b w d}{f_y} \geq \frac{200 b w d}{f_y}$   
 $\max \rho = 0.025$

Bottom steel at support not less than 50% of negative steel at top  
Top steel at mid span not less than  $A_s/4$  (max) in the span

**BRIEF SPECIFICATIONS FOR COLUMNS REINFORCEMENT**  
(Section 10.11, 12 & 21 ACI Code 318R-05)

**COLUMN LAPS**  
Class A = 1.0  $l_d$   
Class B = 1.3  $l_d$   
but not less than 12" column size 12" (min)  
 $A_s$  (min) = 0.01  $b d$

**Spacing of Ties**  
(ACI code section 7.10.5)  
mid portion  $l \geq 2l_0$   
minimum of the following  
i) 16  $d_b$  (long steel)  
ii) 48  $d_b$  (ties)  
iii)  $b$  or  $d$   
 $l_0$  to be not less than  
i) depth of member  
ii) L/6 of clear span  
iii) 18"

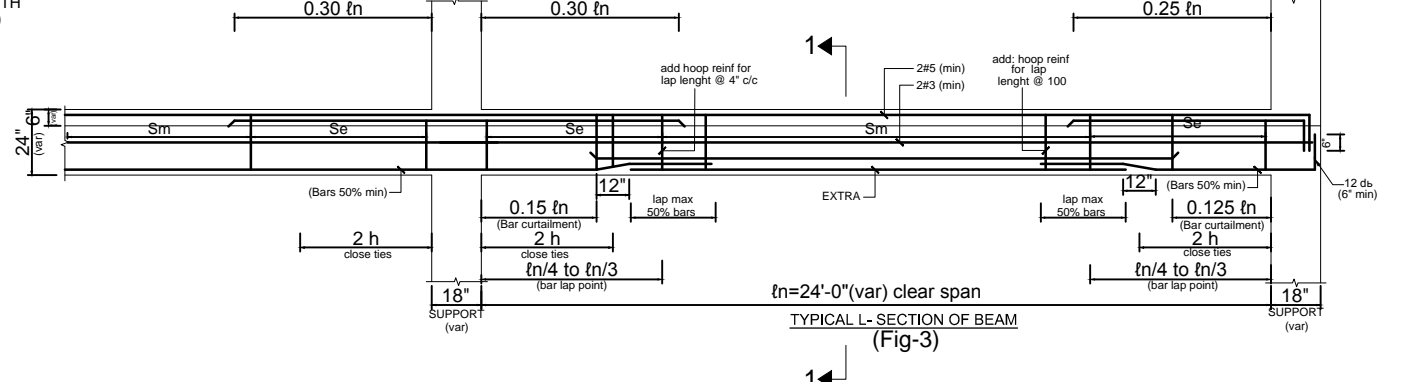
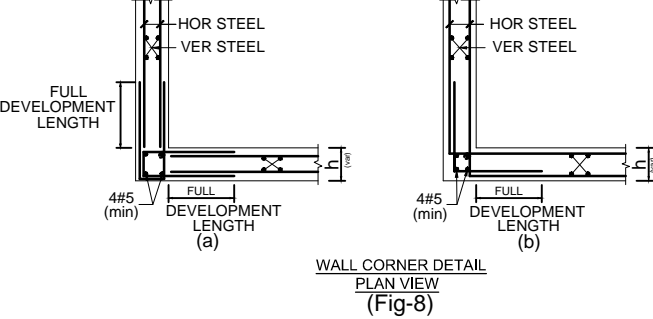
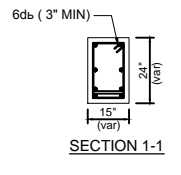
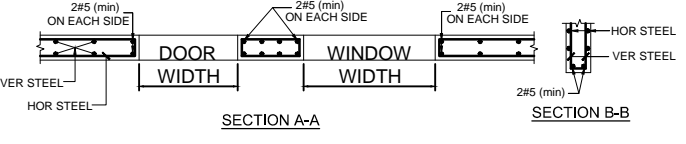
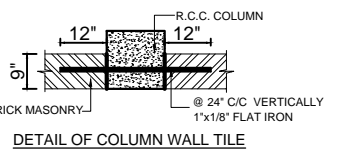
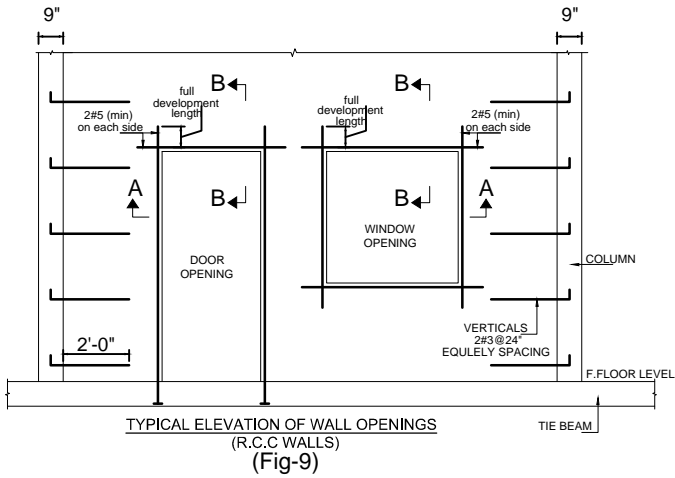
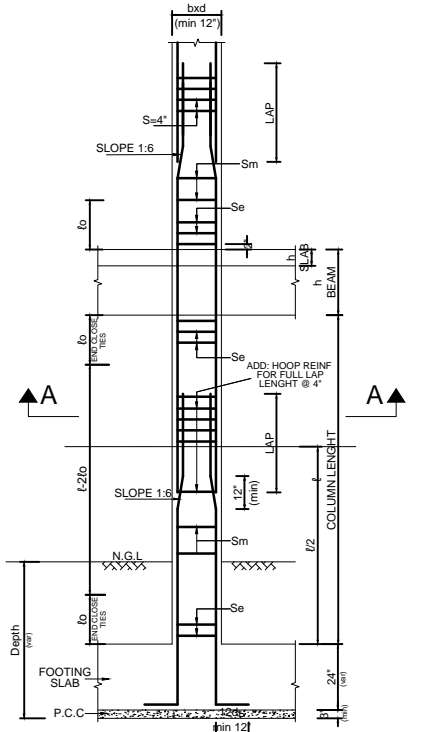
**Spacing of ties at ends ( $l_0$ )**  
(ACI code section 21.4.4)  
minimum of the following  
i)  $b/4$  or  $d/4$   
ii) 6  $d_b$  (long steel smaller bar)  
iii) 4"

$l_d$  for tension bars (ACI code 12.2.2)  
 $l_d = 0.04 A_b f_y / f'_c$   
or  $l_d = 0.0004 d_b f_y$  nor less than 12" which ever is greater (for bars # 11 & smaller)

$l_d$  for compression bars (ACI 2005)  
 $l_d = 0.02 d_b f_y / f'_c$   
or  $l_d = 0.0003 d_b f_y$  nor less than 8" which ever is greater

(ACI 2005)  
#6 & smaller  
 $l_d = f_y d_b / 25 f'_c$   
#7 & longer  
 $l_d = f_y d_b / 20 f'_c$

(ACI 2005)  
 $l_d = 0.0005 f_y d_b$



**CONVERSION FACTOR**  
1 INCH = 25.4 mm  
1 IBS = 4.448 newton

**STRUCTURAL WALLS**  
(Sections 10, 11, 14, 21 ACI Code 318R-05)

Minimum Vertical & Horizontal Steel = 0.0025  
Two layers, maximum spacing = 18"

With Boundary Elements  
Minimum wall thickness,  $h = \frac{1}{25}$  of the height or length which ever is smaller

For boundary element in shape of columns  
 $A_s$  (min) = 0.01  $b d$   
enclosed by lateral ties in addition to vertical & horizontal steel. Provide 2#5 bars around all openings with full tension development length.

TENDER DRAWING	S.NO.	REVISION	DATE	BY PLAN	PROJECT	PROJECT TITLE	DRAWING TITLE	RESIDENT ARCHITECT	CONSULTANT	STRUCTURE	DATE ISSUE:
					QUAIDE-AWAM UNIVERSITY OF ENGINEERING SCIENCES & TECHNOLOGY NAWABSHAH	SOFTWARE ENGINEERING DEPARTMENT	BRIEF SPECIFICATIONS, CONSTRUCTION PROCEDURE & TYPICAL STRUCTURAL DETAILS	PRESEZADA MASROOR RAZA SIDDIQUE	NAQVI AND SIDDIQUE CONSULTING CIVIL & STRUCTURAL ENGINEERS HOUSE FIVE SEEF STREET 7 CHAMAN DAR COLONY, RAWALPINDI	GLOBAL ENGINEERING SERVICES CONSULTING CIVIL & STRUCTURAL ENGINEERS HOUSE FIVE SEEF STREET 7 CHAMAN DAR COLONY, RAWALPINDI	APRIL 2022
									ENGR. M.M YOUSAF MICROSTRUCT ENGR. (M.E.S.P.A.) RAWALPINDI	ENGR. M.M YOUSAF MICROSTRUCT ENGR. (M.E.S.P.A.) RAWALPINDI	ST-001 2022-03-1275



## GENERAL TECHNICAL NOTES

- FIGURED DIMENSIONS ARE TO BE FOLLOWED.
- ALL STEEL SHOULD BE CHECKED FOR ITS QUALITY AND PLACEMENT DETAILS AS SHOWN IN DRAWINGS.
- EXTRA CARE IS REQUIRED FOR PROPER PLACEMENT OF TOP REINFORCEMENT AT SUPPORT SECTIONS AND CANTILEVERS.
- DOTTED BARS DESIGNATE TOP REINFORCEMENT.
- PROVIDE L- SHAPED END HOOKS FOR ALL BARS AT DISCONTINUOUS ENDS IN FOOTINGS, WALLS , BEAMS AND SLABS AS SHOWN IN DRAWINGS.
- LAP LENGTH (CLASS C SPLICE, SECTION 12.15.1 ACI 318-99).
  - 3/8" DIA BARS = 24"
  - 1/2" DIA BARS = 30"
  - 5/8" DIA BARS = 36"
  - 3/4" DIA BARS = 45"
  - 1" DIA BARS = 60"
  - 1 1/4" DIA BARS = 75"
- PROVIDE 3/8" DIA AT 12" C/C AS DISTRIBUTION STEEL IF NOT SHOWN IN DRAWINGS.
- MINIMUM CONCRETE COVER.
  - FOOTINGS =2"
  - SLABS =3/4"
  - BEAMS =1 1/2"
  - COLUMNS =1 1/2"
  - WATER TANKS AND RETAINING WALLS I- WATER/EARTH FACE = 2"
  - EXPOSED TO WEATHER = 2"
  - OTHER FACES = 1"
- NET BEARING CAPACITY OF SOIL IS 1.0 TON/SFT AS PROVIDED IN GEOTECH REPORT.
- ALL FOOTINGS SHOULD BE TAKEN BELOW THE ORIGINAL GROUND LEVEL TO ACHIEVE THE MINIMUM DEPTH AS SHOWN IN DRAWINGS.
- ALL DRAWINGS SHOULD BE READ IN CONJUNCTION WITH ARCHITECTURAL DRAWINGS.
- CONTRACTOR WILL CO-ORDINATE ALL DRAWINGS SUCH AS ARCHITECTURAL, STRUCTURAL, ELECTRICAL, MECHANICAL, WATER SUPPLY, DRAINAGE ETC: BEFORE EXECUTION OF WORK.
- TESTING OF STEEL & CONCRETE  
CONTRACTOR WILL ARRANGE REGULAR TESTING OF MATERIALS SUCH AS STEEL & CONCRETE TO ACHIEVE THE SPECIFIED STRENGTHS AND MAINTAIN RECORD OF TEST REPORTS.

## QUALITY OF CONCRETE

- COLUMN & WALL FOOTINGS & TIE BEAMS.**  
Minimum concrete compressive strength for 6"x12" cylinder to be 3000 psi at 28 days age. Concrete Nominal Mix 1:2:4 or more rich to provide specified strength (Equivalent 6"x6"x6" cube strength 3750 psi)
- COLUMNS.**  
Minimum concrete compressive strength for 6"x12" cylinder to be 4000 psi at 28 days age. Concrete Nominal Mix to be 1:1 1/2:3 or more rich to provide specified strength (Equivalent 6"x6"x6" cube strength 4500 psi)
- BEAMS, RIBS & SLABS.**  
Minimum concrete compressive strength for 6"x12" cylinder to be 3000 psi at 28 days age. Concrete Nominal Mix to be 1:2:4 or more rich to provide specified strength (Equivalent 6"x6"x6" cube strength 3750 psi)
- Use of super plasticizers and water reducing agents recommended to reduce the water cement ratio and to increase workability and density of concrete.
- All concrete mixes to be used, should be got designed & approved before execution of work.
- Quality, size and gradation of aggregates (fine & course) as used during the mix design, should be strictly adhered with.
- CEMENT TYPE**  
Use sulphate Resisting Cement type V for all concrete and brick work below Plinth level (G.Floor level) as detailed below Such as Footings, Columns, Plinth Beams, Grade Slab, D.P.C & Brick Work etc as required to resist chloride effect because of dampness.

## 8.BITUMEN COATING

All Concrete work & Brick work below plinth level to be coated with two coats of approved type of bitumen as required to resist chloride effect because of dampness.

## NOTE:

- ALL LAYOUT DIMENSIONS AND LEVELS TO BE AS PER ARCH DRAWINGS.
- PROVIDE #2 DOUBLE-LEG TIE BARS AT 300 CENTRES AT COMMON JOINT BETWEEN WALLS AND COLUMNS. THESE BARS SHOULD PASS THROUGH COLUMNS AND EXTEND UPTO 18" INTO WALLS ON EACH SIDE OF COLUMNS.

## QUALITY OF STEEL REINFORCEMENT.

- Use deform steel Grade-60 bars for size No:3 (3/8"dia) & No:4 (1/2" dia) for column ties, beam stirrups. ASTM specification A615. (Minimum yield strength 60,000 psi)
- Use deform steel Grade-60 bars for size No:3 (3/8"dia) & No:4 (1/2" dia) for slab steel. ASTM specification A615. (Minimum yield strength 60,000 psi)
- Use deform steel Grade-60 for size No:5 & larger for all columns, beams, walls, etc. ASTM specification A615. (Minimum yield strength 60,000 psi)

## DESIGN LIVE LOADS.

The building is designed for following live loads in addition to its own dead weight, super imposed dead load.

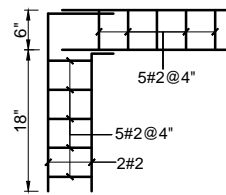
Rooms	= 50 PSF.
Corridor and Lobbies	= 100 PSF.

## NO OF STORIES.

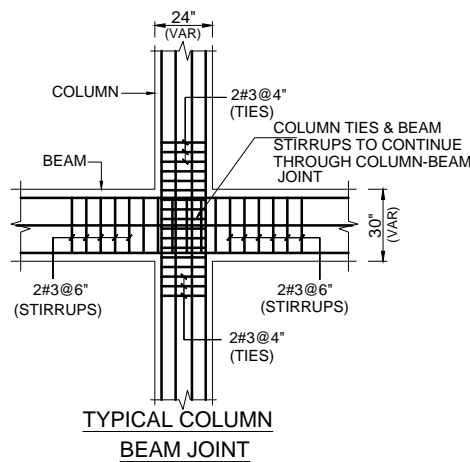
Ground Floor & First Floor (2 STORY)

## EARTH QUAKE ZONE.

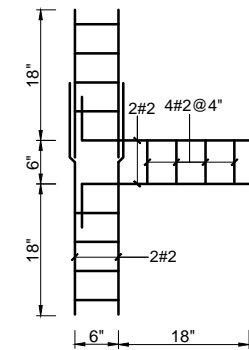
Building design conforms to minor damage zone 2B, U.B.C 1997.



PLAN OF BRICK WALL TIE FOR CORNER JOINT



TYPICAL COLUMN BEAM JOINT



PLAN OF BRICK WALL TIE FOR T- JOINT

## NOTATIONS USED

C	COLUMNS
W	WALLS
SW	SHEAR WALLS
WC	WALL COLUMN
PC	PICKUP COLUMN
WF	WALL FOOTING
RW	RETAINING WALLS
F	COLUMN FOOTING
TB	TIE BEAM
GSP	G.F SLAB PANELS
ISP	F.F SLAB PANEL
RSP	ROOF SLAB PANELS
MSP	MUMTY SLAB PANELS
GSB	G.F BEAMS
ISB	F.F BEAMS
RSB	ROOF BEAMS
MSB	MUMTY SLAB BEAMS
C.B	CONCEALED BEAMS
WB	WALL BEAMS
PB	PERGOLA BEAMS
NB	NOT BEARING WALL

## SCHEDULE OF BEAMS & LINTELS (NOT SHOWN IN DRAWINGS)

S.NO	SPAN ( FT )	S I Z E ( B+D )	STEEL REINFORCEMENT		NO	REMARKS
			MAIN STEEL	STIRRUPS		
1	UP TO 4'	9" x 9"	2-3/8" DIA (TOP) 2-1/2" DIA (BOTTOM)	3/8" DIA @ 9" C/C		
2	5' TO 6'	9" x 9"	2-1/2" DIA (TOP) 3-1/2" DIA (BOTTOM)	3/8" DIA @ 9" C/C		
3	7' TO 9'	9" x 12"	2-1/2" DIA (TOP) (2-3/4") DIA (BOTTOM)	3/8" DIA @ 9"C/C		
4	10' TO 12'	9" x 15"	2-1/2" DIA (TOP) (2+1)3/4" DIA (BOTTOM)	3/8" DIA @ 9"C/C		2-3/4" DIA FULL LENGTH +1 EXTRA AT MIDDLE 3/4 OF SPAN
5	13' TO 15'	9" x 18"	2-1/2" DIA (TOP) (2+2)3/4" DIA (BOTTOM)	3/8" DIA @ 9"C/C		2-3/4" DIA FULL LENGTH +2 EXTRA AT MIDDLE 3/4 OF SPAN

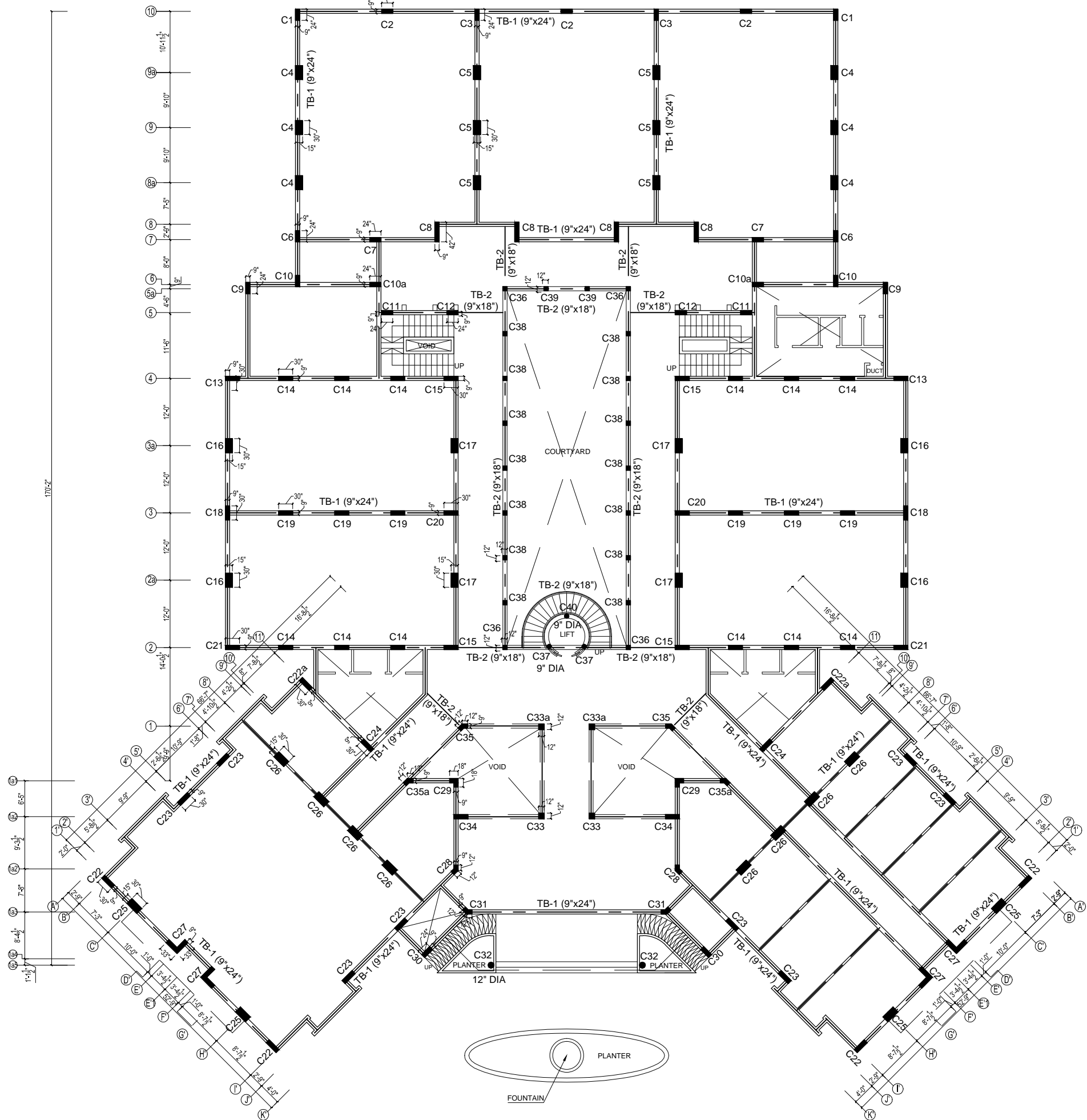
NOTE:- WIDTH OF LINTEL OR BEAM TO BE SAME AS WIDTH OF WALL .

TENDER DRAWING	S.NO.	REVISION	DATE	REV. PLAN	PROJECT	PROJECT TITLE	DRAWING TITLE	RESIDENT ARCHITECT	CONSULTANT	STRUCTURE	DRAWN BY	DRAWING NO.
					QUAID-E-AWAM UNIVERSITY OF ENGINEERING SCIENCES & TECHNOLOGY NAWABSHAH	SOFTWARE ENGINEERING DEPARTMENT	GENERAL TECHNICAL NOTES		NAQVI AND SIDDIQUIE	GLOBAL ENGINEERING SERVICES	ARSLAN MUNIR	S-01
												2022-03-1275
											ENGR. M.M YOUSAF	DATE ISSUE: APRIL 2022

### SCHEDULE OF COLUMNS

S.NO	DESIGNATION	SIZE	SHAPE	STEEL REINFORCEMENT			REMARKS
				LONG	TIES	DISTANCES	
1	C1,C2,C3, C6,C7	9" x 24"					R.C.C COLUMN
2	C4	15" x 30"					R.C.C COLUMN
3	C5	15" x 30"					R.C.C COLUMN
4	C8	9" x 42"					R.C.C COLUMN
5	C9,C10,C10a, C11,C12	9" x 24"					R.C.C COLUMN
6	C13,C14,C15, C18,C19, C20,C21	9" x 30"					R.C.C COLUMN
7	C16,C17	15" x 30"					R.C.C COLUMN
8	C22,C22a, C23,C24	9" x 30"					R.C.C COLUMN
9	C25,C26	15" x 30"					R.C.C COLUMN
10	C27	9" x 33" x 33"					R.C.C COLUMN
11	C28,C31	9" x 12" x 12"					R.C.C COLUMN
12	C29	9" x 18" x 18"					R.C.C COLUMN
13	C30,C34	9" x 24"					R.C.C COLUMN
14	C32	12" DIA					R.C.C COLUMN
15	C33,C33a	12" x 12"					R.C.C COLUMN
16	C35,C35a	9" x 12" x 12"					R.C.C COLUMN
17	C36,C38,C39	12" x 12"					R.C.C COLUMN
18	C37,C40	9" DIA					LIFT COLUMN
19	PC-1	9" x 12" x 12"					
20	PC-2	9" x 24"					

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Z1	Z2	Z3
3'-7 1/2"	6'-0"	3'-9"	4'-1 1/2"	6'-7 1/2"	1'-6"	7'-0"	3'-4 1/2"	3'-0"	2'-6"	2'-5"	4'-6"	4'-4 1/2"	4'-4 1/2"	4'-6"	2'-6"	2'-5"	3'-9"	3'-4 1/2"	7'-0"	1'-10 1/2"	1'-6"	6'-7 1/2"	4'-1 1/2"	3'-9"	8'-10 1/2"	3'-7 1/2"		



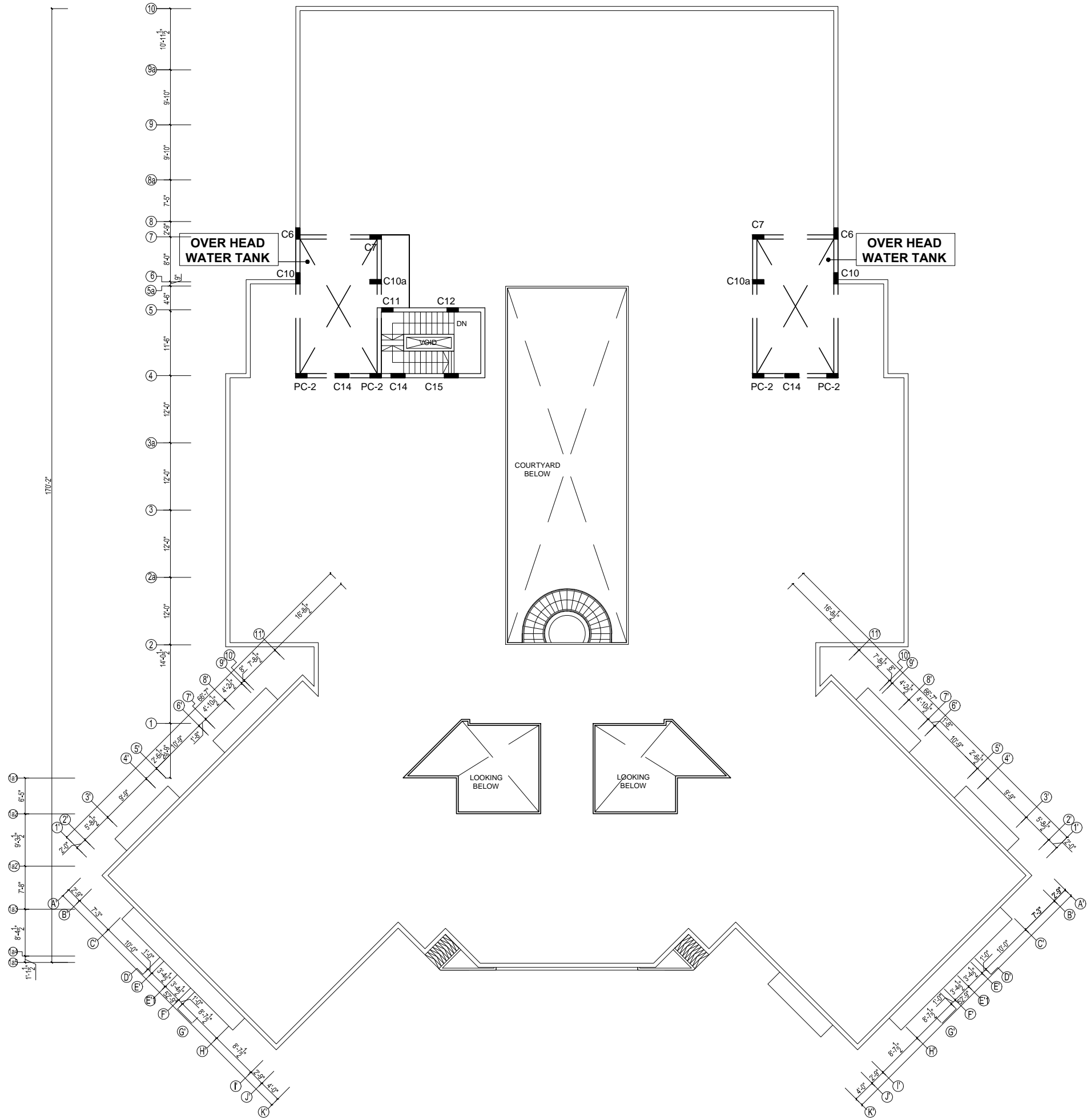
**COLUMN LAYOUT  
FOR GROUND FLOOR PLAN**

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						QUAID-E-AWAM UNIVERSITY OF ENGINEERING SCIENCES & TECHNOLOGY NAWABSHAH	COLUMN LAYOUT FOR GROUND FLOOR PLAN	PREERAZA MASROOR RASA SIDDIQUE	GLOBAL ENGINEERING SERVICES CONSULTING CIVIL & STRUCTURAL ENGINEERS HOUSE #101, STREET 7, CHAMANZAR COLONY, RAWALPINDI	ENGR. M.M YOUSAF REGISTERED ENGINEER MARSOUJ SAJID	ARSLAN MUNIR	S-03
						SOFTWARE ENGINEERING DEPARTMENT			ENGR. SIKH	CHECKED BY		DATE ISSUE: APRIL 2022




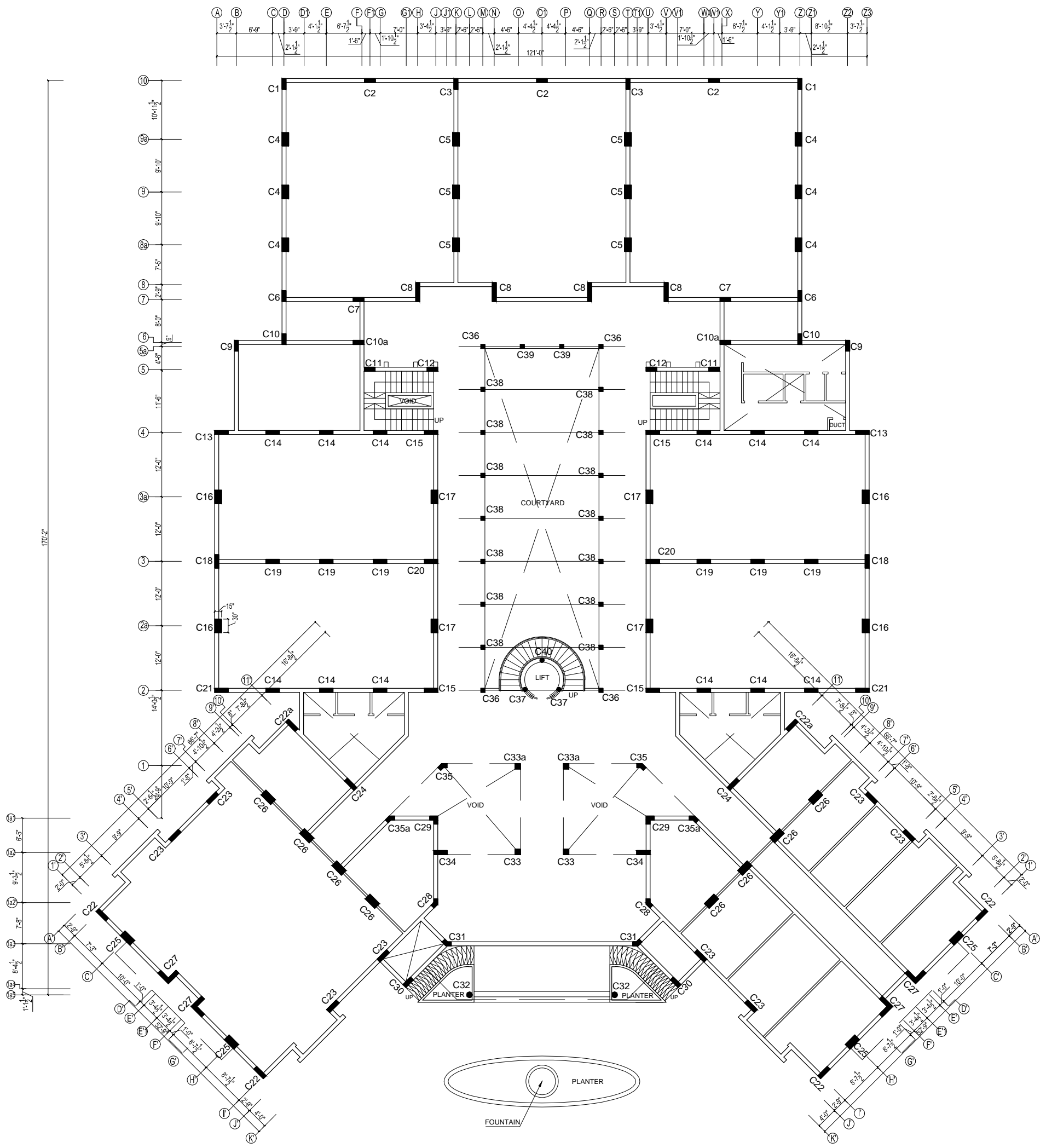


A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	2	3	
3-7 1/2"	6-9"	3-9"	4-1 1/2"	6-7 1/2"	1-8"	11-10 1/2"	7-0"	3-4 1/2"	3-0"	2-6"	2-6"	4-6"	4-6"	4-4 1/2"	4-6"	2-8"	2-6"	3-9"	3-4 1/2"	7-0"	1-10 1/2"	1-6"	6-7 1/2"	4-1 1/2"	3-9"	8-10 1/2"	3-7 1/2"




**COLUMN LAYOUT  
FOR ROOF PLAN**

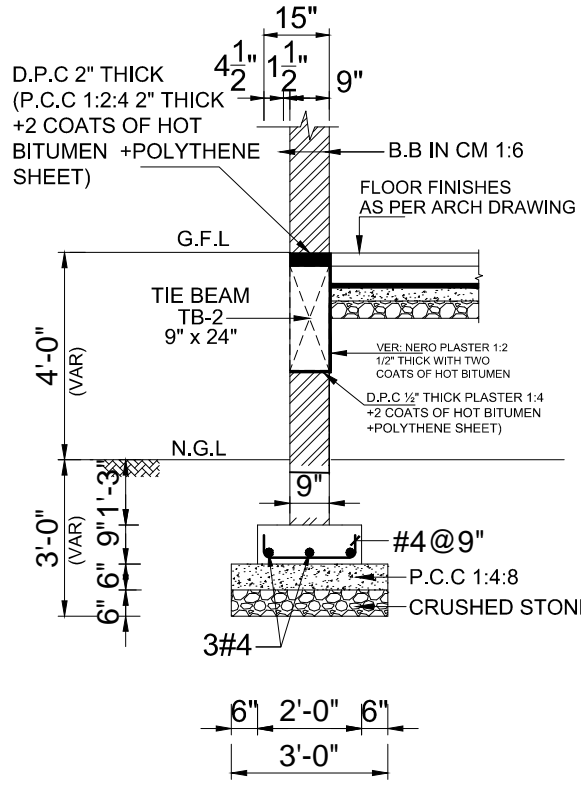
TENDER DRAWING	REV.	REVISION	DATE	REV. PLAN		<b>PROJECT</b> QUAID-E-AWAM UNIVERSITY OF ENGINEERING SCIENCES & TECHNOLOGY NAWABSHAH	<b>PROJECT TITLE</b> SOFTWARE ENGINEERING DEPARTMENT	<b>DRAWING TITLE</b> COLUMN LAYOUT FOR ROOF PLAN	<b>RESIDENT ARCHITECT</b>  PREERAZA MASROOR RASA SIDDIQUE	<b>CONSULTANT</b> <b>NAQVI AND SIDDIQUE</b> CONSULTING CIVIL & STRUCTURAL ENGINEERS HOUSE #101, STREET 7, CHAMAN ZAR COLONY, RAWALPINDI PUNJAB <b>ENGR. SIGN:</b>	<b>STRUCTURE</b> GLOBAL ENGINEERING SERVICES CONSULTING CIVIL & STRUCTURAL ENGINEERS HOUSE #101, STREET 7, CHAMAN ZAR COLONY, RAWALPINDI CHECKED BY: ENGR. M.M YOUSAF M.Sc. STRUCT. ENGRG. (M. ENRNG) M.ASCE (U.S.A.I.C.E.)	DRAWN BY: ARSLAN MUNIR SCALE: AS SHOWN	DRAWING NO: <b>S-03</b> DATE ISSUE: APRIL 2022



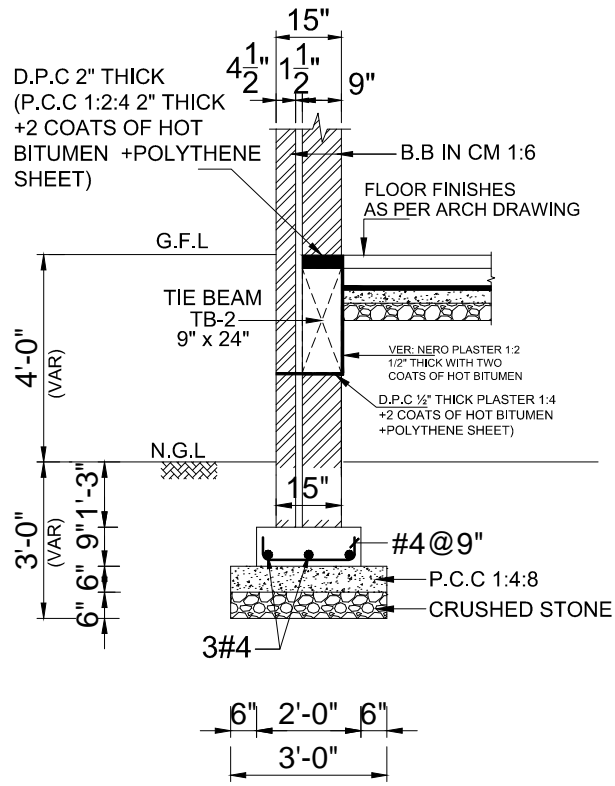
**FOOTING PLAN**

TENDER DRAWING	REV.	REVISION	DATE		PROJECT QUAID-E-AWAM UNIVERSITY OF ENGINEERING SCIENCES & TECHNOLOGY NAWABSHAH	PROJECT TITLE SOFTWARE ENGINEERING DEPARTMENT	DRAWING TITLE FOOTING PLAN	RESIDENT ARCHITECT  PREERAZA MASROOR RASA SIDDIQUE	CONSULTANT <b>NAQVI AND SIDDIQUE</b> CONSULTING CIVIL & STRUCTURAL ENGINEERS HOUSE #112/F, STREET 7, CHANAY ZAR COLONY, RAWALPINDI PUNJAB ENGR 8328	STRUCTURE GLOBAL ENGINEERING SERVICES CONSULTING CIVIL & STRUCTURAL ENGINEERS HOUSE #112/F, STREET 7, CHANAY ZAR COLONY, RAWALPINDI	DRAWN BY ARSLAN MUNIR SCALE AS SHOWN	DRAWING NO. <b>S-03</b> 2022-03-1275
	CHECKED BY	ENGR. M.M YOUSAF M.Sc. STRUCT. ENGRG. M.I. ENGRG. M.ASCE/US.A.I.C.E.	DATE ISSUE: APRIL 2022									

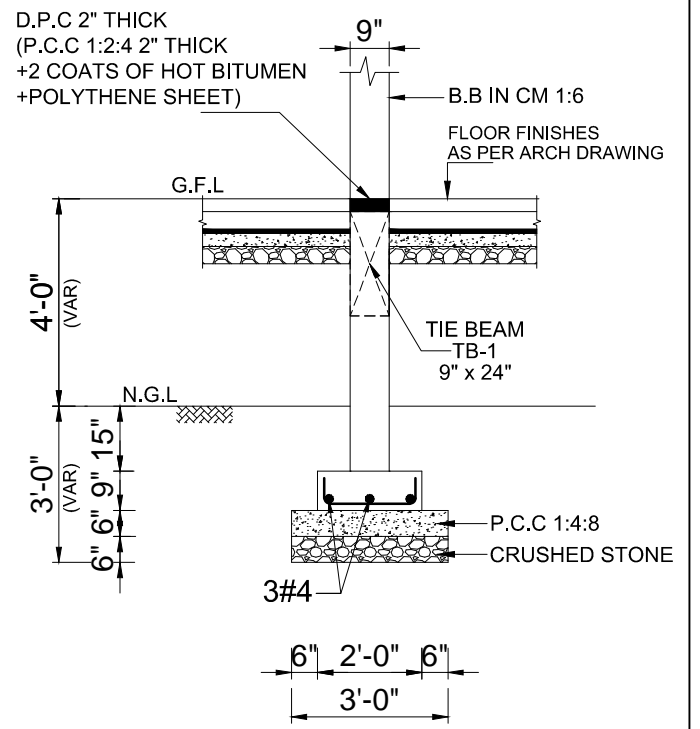




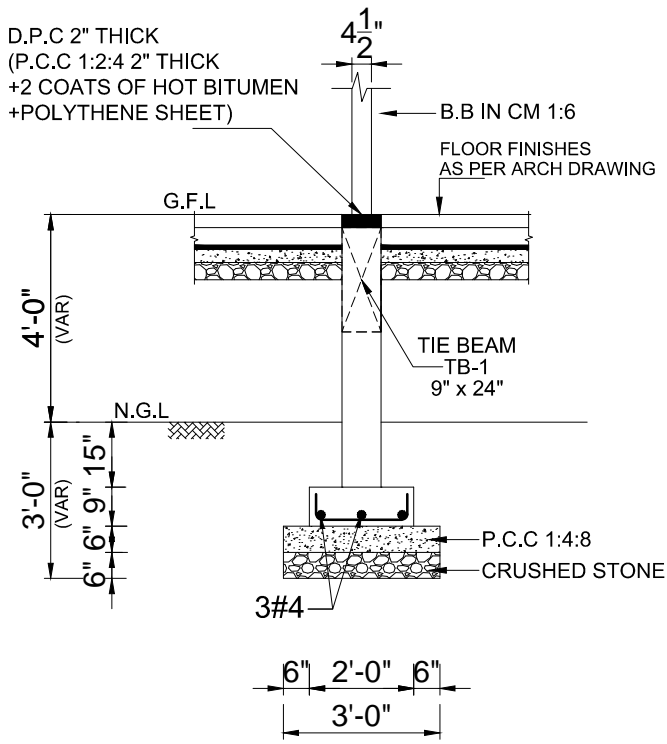
TYPICAL SECTION OF WALL FOOTING WF1 (EXTERNAL)



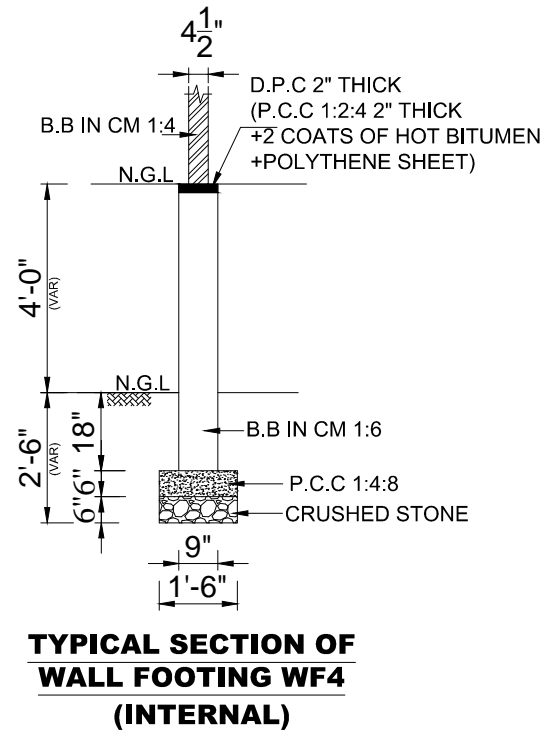
TYPICAL SECTION OF WALL FOOTING WF1a (EXTERNAL)



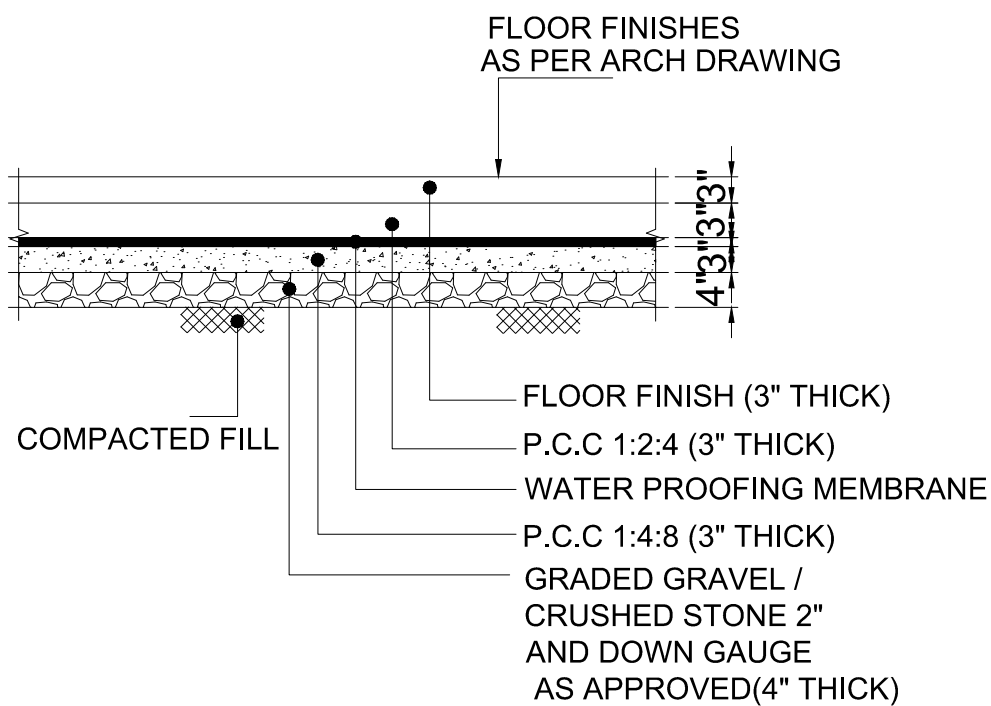
TYPICAL SECTION OF WALL FOOTING WF2 (INTERNAL)



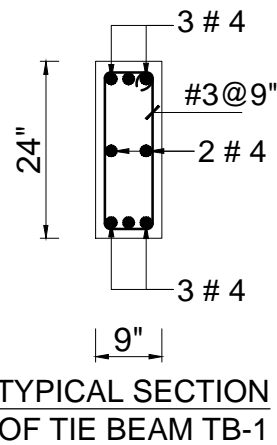
TYPICAL SECTION OF WALL FOOTING WF3 (INTERNAL)



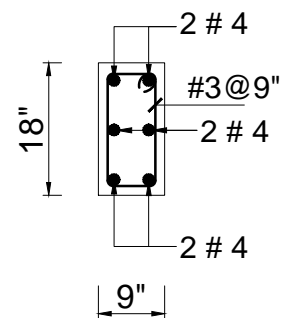
TYPICAL SECTION OF WALL FOOTING WF4 (INTERNAL)



TYPICAL FLOOR DETAIL

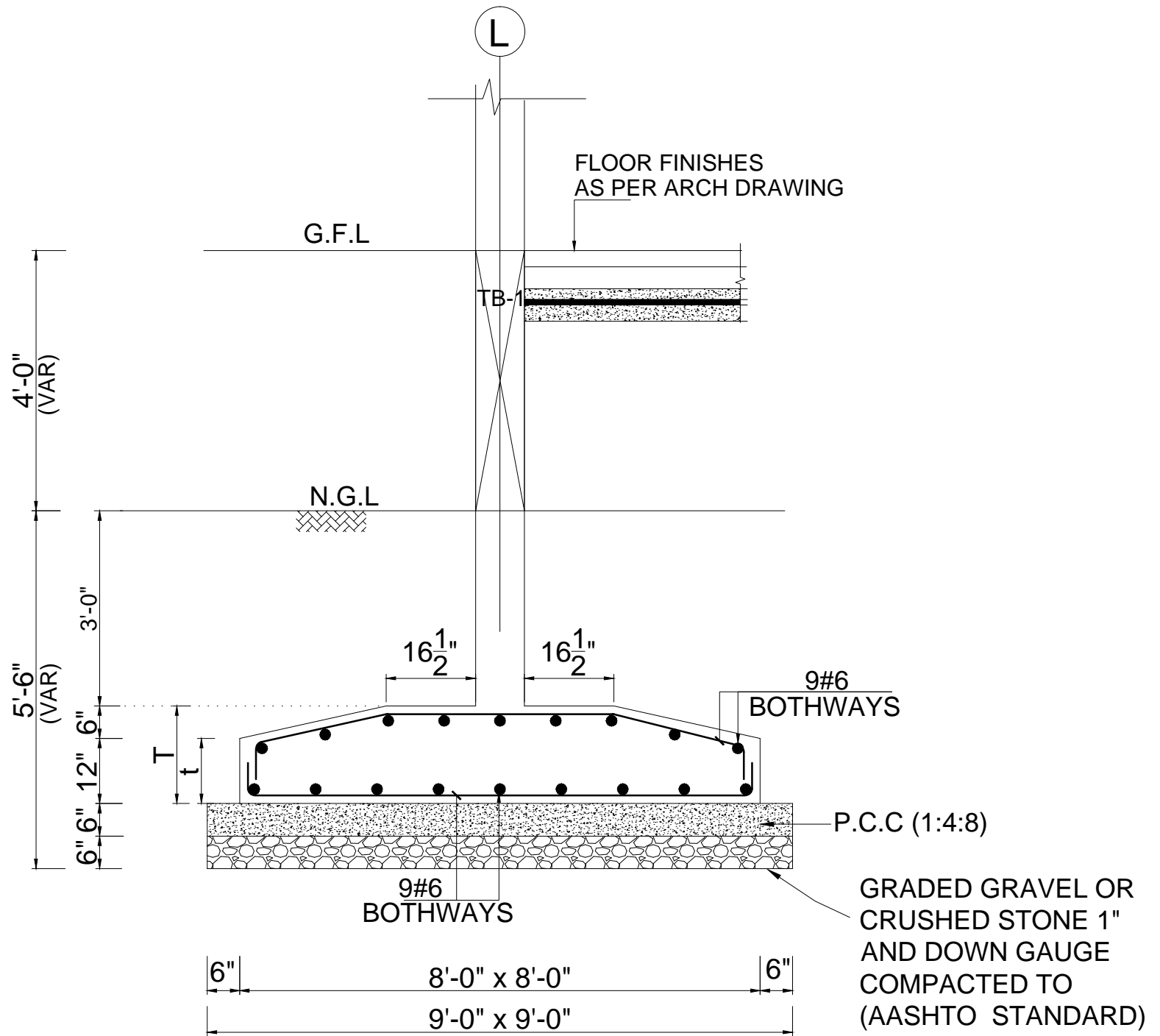


TYPICAL SECTION OF TIE BEAM TB-1

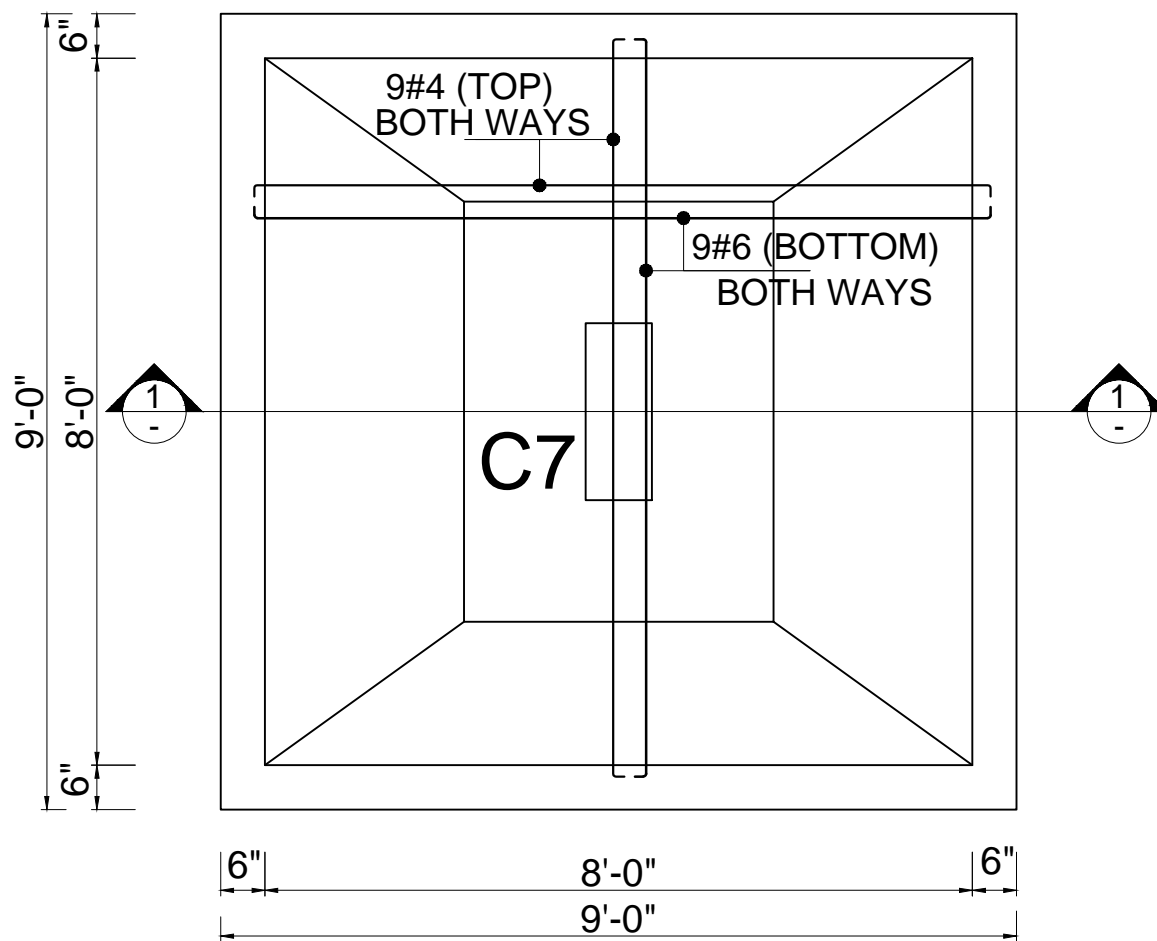


TYPICAL SECTION OF TIE BEAM TB-2


TENDER DRAWING	S.NO.	REVISION	DATE	BY	PROJECT	PROJECT TITLE	DRAWING TITLE	RESIDENT ARCHITECT	CONSULTANT	STRUCTURE	DRAWN BY	DRAWING NO.
					QUAID-E-AWAM UNIVERSITY OF ENGINEERING SCIENCES & TECHNOLOGY NAUWABSHAH	SOFTWARE ENGINEERING DEPARTMENT	TYPICAL DETAILS OF WALL FOOTING		NAQVI AND SIDDIQUIE	GLOBAL ENGINEERING SERVICES	ARSLAN MUNIR	S-08
									HOUSE #10, 10/F, STREET 7, CHAMAN ZAR COLONY, RAWALPINDI	ENGR. M.M YOUSAF	SCALE AS SHOWN	2022-03-12/25
								PERRADA MASROOR RASA SIDDIQUIE		MASROOR RASA SIDDIQUIE		DATE ISSUE: APRIL 2022

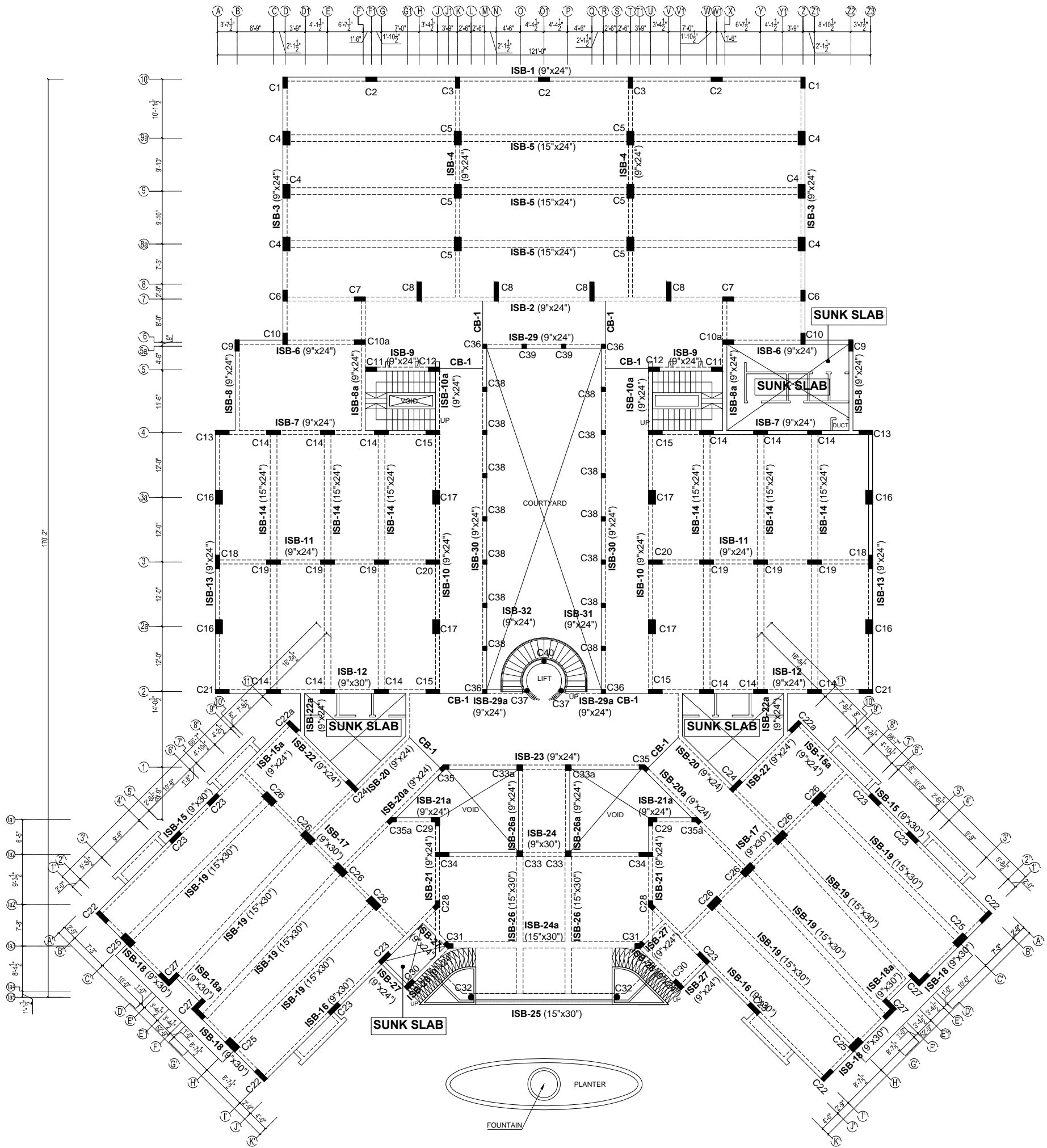


**TYPICAL SECTION 1-1 FOR  
COLUMN C8 FOOTING F11**





**PLAN OF  
FOOTING F11**

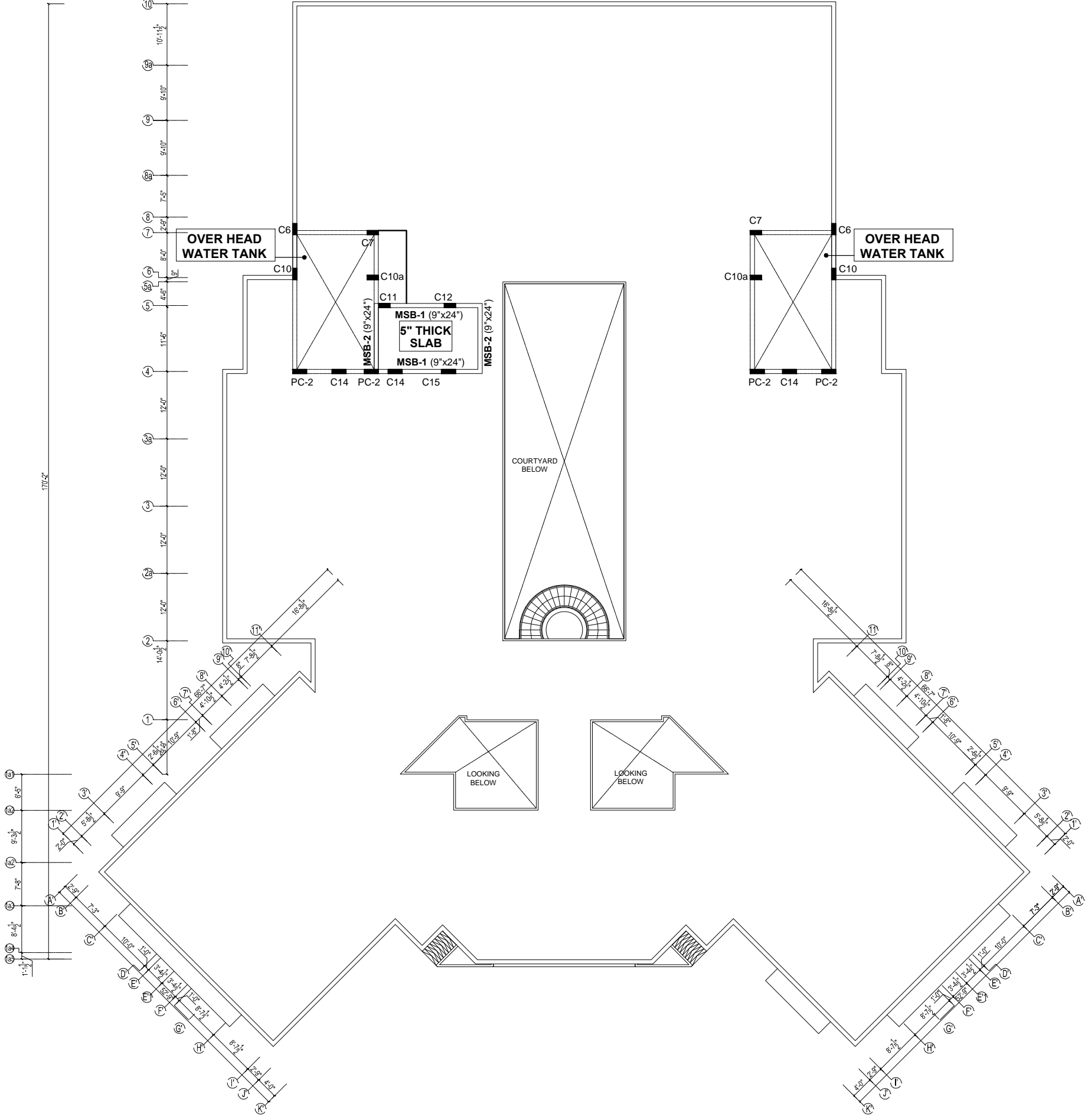
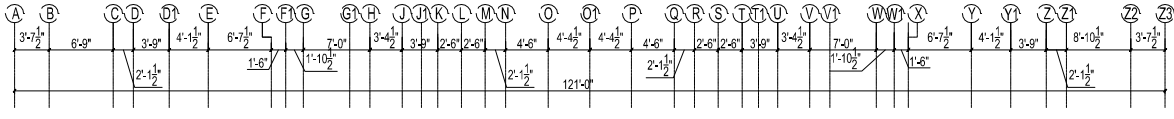
TENDER DRAWING	REV.	REVISION	DATE		<b>PROJECT</b> QUAID-E-AWAM UNIVERSITY OF ENGINEERING SCIENCES & TECHNOLOGY NAWABSHAH	<b>PROJECT TITLE</b> SOFTWARE ENGINEERING DEPARTMENT	<b>DRAWING TITLE</b> TYPICAL DETAILS OF COLUMN FOOTING	<b>RESIDENT ARCHITECT</b>  PREERAZA MASROOR RAZA SIDDIQUIE	<b>CONSULTANT</b> <b>NAQVI AND SIDDIQUIE</b> AND ASSOCIATES CIVIL ENGINEERS & ARCHITECTS HOUSE #10, 1ST FLOOR, 1ST STAGE, G-1/1 PHEASANT COLONY, RAWALPINDI PUNJAB	<b>STRUCTURE</b> GLOBAL ENGINEERING SERVICES CONSULTING CIVIL & STRUCTURAL ENGINEERS HOUSE #10, 1ST FLOOR, 1ST STAGE, G-1/1 PHEASANT COLONY, RAWALPINDI	<b>DRAWN BY</b> ARSLAN MUNIR SCALE AS SHOWN	<b>DRAWING NO.</b> S-09 DATE ISSUE: APRIL 2022
	ENGR. M.M YOUSAF M.Sc.STRUCT. ENGRG. M.I.EMSWAY M.ASCE(U.S.A.I.C.E.)											




**FRAMING PLAN FOR FIRST FLOOR SLAB**  
(GROUND FLOOR ROOF)

TENDER DRAWING	S.NO.	REVISION	DATE	REV. PLAN	 PROJECT QAUID-E-AWAM UNIVERSITY OF ENGINEERING SCIENCES & TECHNOLOGY NAWABSHAH	PROJECT TITLE	DRAWING TITLE	RESIDENT ARCHITECT	CONSULTANTS <b>NAQVI AND SIDDIQIE</b> REG. ARCHITECT & ENGINEER LOWER GROUND FLOOR, 8/F CENTER 15/17 16/17/18/19/20/21/22/23/24/25/26/27 ISLAMABAD ENGR. REG. 	STRUCTURE GLOBAL ENGINEERING SERVICES CONSULTING CIVIL & STRUCTURAL ENGINEERS HOUSE #10 15/F, STREET 7, CHANAY ZAR COLONY, RAWALPINDI CHECKED BY: ENGR. M.M YOUSAF M.B.C.E.U.S.A.I.C.E.	DRAWN BY: ARSLAN MUNIR SCALE: AS SHOWN <b>S-10</b> 2022-03-12/25 DATE ISSUE: APRIL 2022
						SOFTWARE ENGINEERING DEPARTMENT	FRAMING PLAN FOR FIRST FLOOR SLAB (GROUND FLOOR ROOF)	PERKHAZA MASROOR RAZA SIDDIQIE	ENGR. REG. PERKHAZA MASROOR RAZA SIDDIQIE		

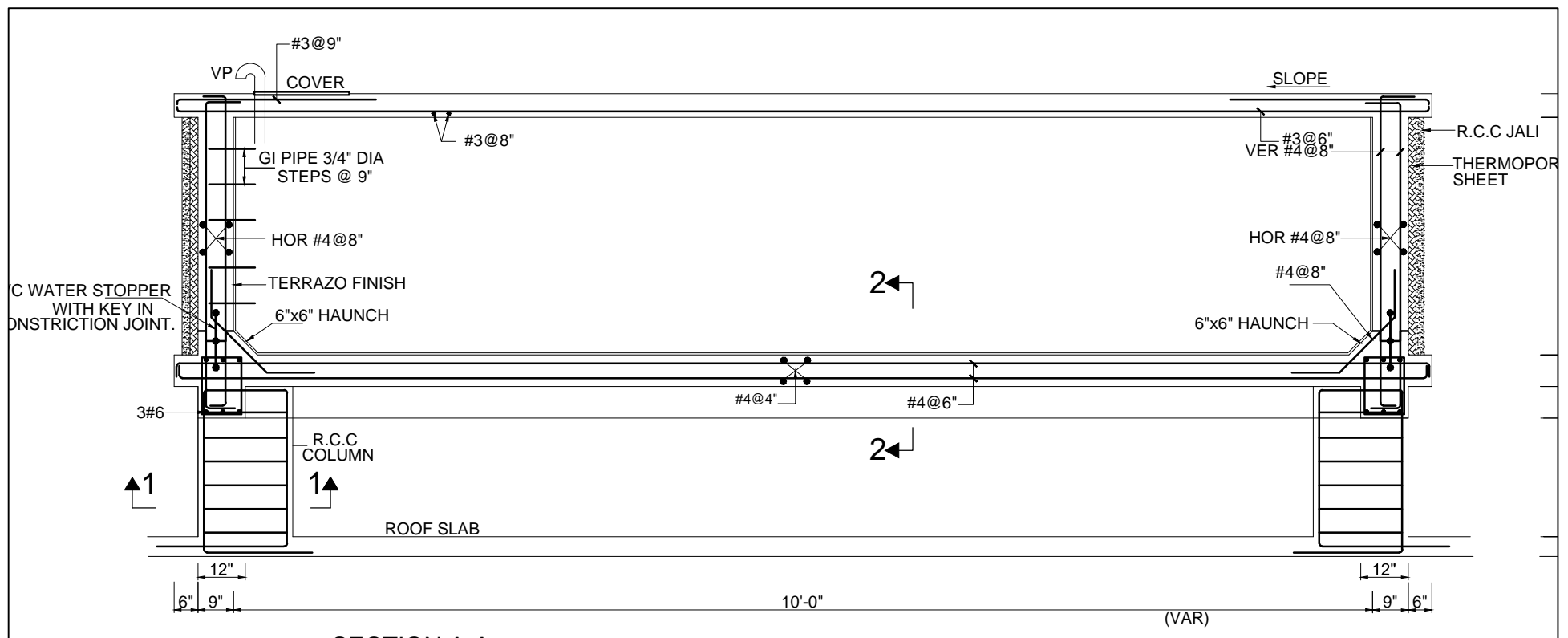




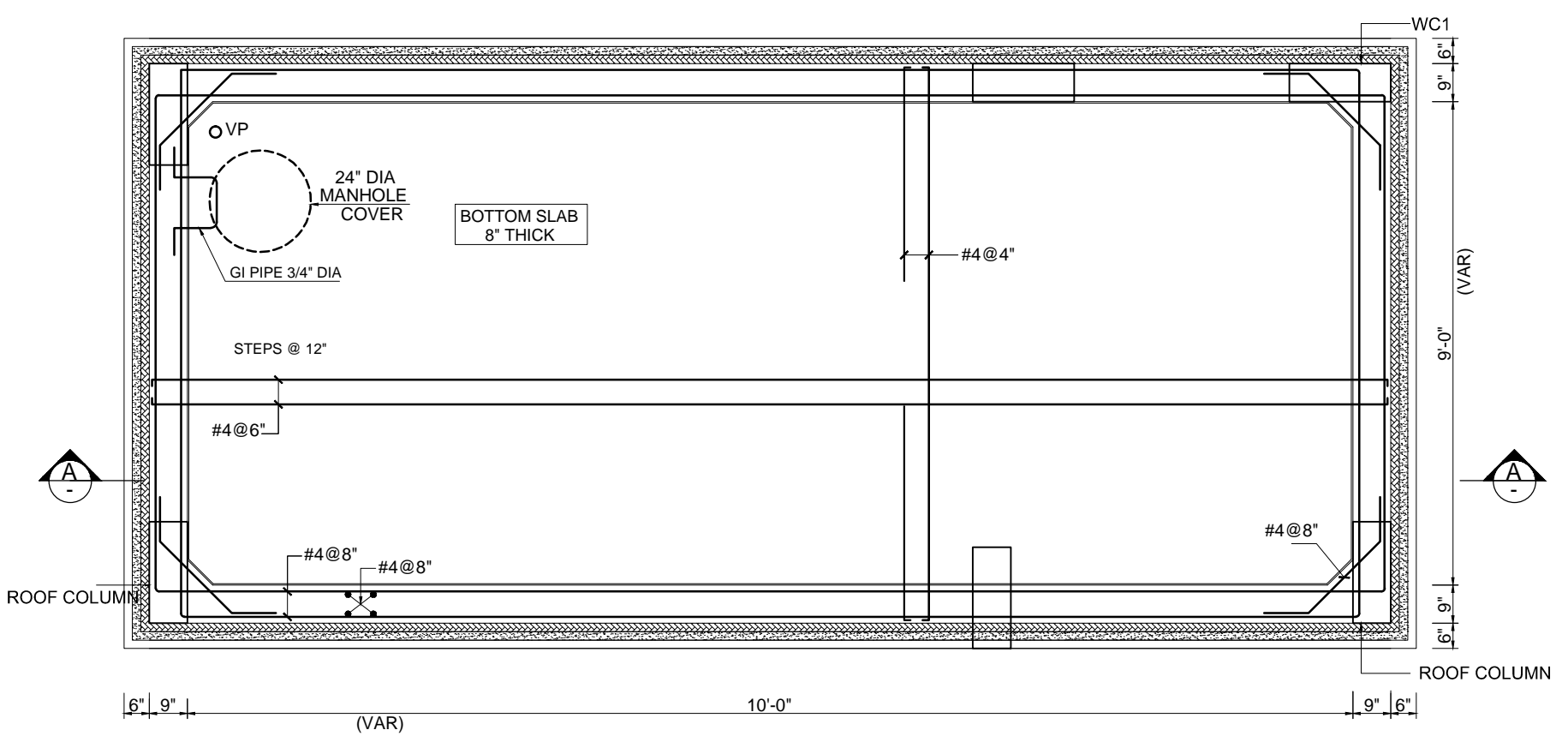
**FRAMING PLAN FOR MUMTY SLAB**

TENDER DRAWING	S.NO.	REVISION	DATE	KEY PLAN	PROJECT	PROJECT TITLE	DRAWING TITLE	RESIDENT ARCHITECT	CONSULTANTS	STRUCTURE	DRAWN BY	DRAWING NO.
					QUAID-E-AWAM UNIVERSITY OF ENGINEERING SCIENCES & TECHNOLOGY NAWABSHAH	SOFTWARE ENGINEERING DEPARTMENT	FRAMING PLAN FOR MUMTY SLAB	PREKSHADA MASROOR RAZA SIDDIQUIE	<b>NAQVI AND SIDDIQUIE</b> ENR. ENGINEERS & ARCHITECTS LOWER GROUND FLOOR, 86F CENTER PLOT NO. 10/10/11/12/13/14/15/16/17/18/19/20/21/22/23/24/25/26/27/28/29/30/31/32/33/34/35/36/37/38/39/40/41/42/43/44/45/46/47/48/49/50/51/52/53/54/55/56/57/58/59/60/61/62/63/64/65/66/67/68/69/70/71/72/73/74/75/76/77/78/79/80/81/82/83/84/85/86/87/88/89/90/91/92/93/94/95/96/97/98/99/100/101/102/103/104/105/106/107/108/109/110/111/112/113/114/115/116/117/118/119/120/121/122/123/124/125/126/127/128/129/130/131/132/133/134/135/136/137/138/139/140/141/142/143/144/145/146/147/148/149/150/151/152/153/154/155/156/157/158/159/160/161/162/163/164/165/166/167/168/169/170/171/172/173/174/175/176/177/178/179/180/181/182/183/184/185/186/187/188/189/190/191/192/193/194/195/196/197/198/199/200/201/202/203/204/205/206/207/208/209/210/211/212/213/214/215/216/217/218/219/220/221/222/223/224/225/226/227/228/229/230/231/232/233/234/235/236/237/238/239/240/241/242/243/244/245/246/247/248/249/250/251/252/253/254/255/256/257/258/259/260/261/262/263/264/265/266/267/268/269/270/271/272/273/274/275/276/277/278/279/280/281/282/283/284/285/286/287/288/289/290/291/292/293/294/295/296/297/298/299/300/301/302/303/304/305/306/307/308/309/310/311/312/313/314/315/316/317/318/319/320/321/322/323/324/325/326/327/328/329/330/331/332/333/334/335/336/337/338/339/340/341/342/343/344/345/346/347/348/349/350/351/352/353/354/355/356/357/358/359/360/361/362/363/364/365/366/367/368/369/370/371/372/373/374/375/376/377/378/379/380/381/382/383/384/385/386/387/388/389/390/391/392/393/394/395/396/397/398/399/400/401/402/403/404/405/406/407/408/409/410/411/412/413/414/415/416/417/418/419/420/421/422/423/424/425/426/427/428/429/430/431/432/433/434/435/436/437/438/439/440/441/442/443/444/445/446/447/448/449/450/451/452/453/454/455/456/457/458/459/460/461/462/463/464/465/466/467/468/469/470/471/472/473/474/475/476/477/478/479/480/481/482/483/484/485/486/487/488/489/490/491/492/493/494/495/496/497/498/499/500/501/502/503/504/505/506/507/508/509/510/511/512/513/514/515/516/517/518/519/520/521/522/523/524/525/526/527/528/529/530/531/532/533/534/535/536/537/538/539/540/541/542/543/544/545/546/547/548/549/550/551/552/553/554/555/556/557/558/559/560/561/562/563/564/565/566/567/568/569/570/571/572/573/574/575/576/577/578/579/580/581/582/583/584/585/586/587/588/589/590/591/592/593/594/595/596/597/598/599/600/601/602/603/604/605/606/607/608/609/610/611/612/613/614/615/616/617/618/619/620/621/622/623/624/625/626/627/628/629/630/631/632/633/634/635/636/637/638/639/640/641/642/643/644/645/646/647/648/649/650/651/652/653/654/655/656/657/658/659/660/661/662/663/664/665/666/667/668/669/670/671/672/673/674/675/676/677/678/679/680/681/682/683/684/685/686/687/688/689/690/691/692/693/694/695/696/697/698/699/700/701/702/703/704/705/706/707/708/709/710/711/712/713/714/715/716/717/718/719/720/721/722/723/724/725/726/727/728/729/730/731/732/733/734/735/736/737/738/739/740/741/742/743/744/745/746/747/748/749/750/751/752/753/754/755/756/757/758/759/760/761/762/763/764/765/766/767/768/769/770/771/772/773/774/775/776/777/778/779/780/781/782/783/784/785/786/787/788/789/790/791/792/793/794/795/796/797/798/799/800/801/802/803/804/805/806/807/808/809/810/811/812/813/814/815/816/817/818/819/820/821/822/823/824/825/826/827/828/829/830/831/832/833/834/835/836/837/838/839/840/841/842/843/844/845/846/847/848/849/850/851/852/853/854/855/856/857/858/859/860/861/862/863/864/865/866/867/868/869/870/871/872/873/874/875/876/877/878/879/880/881/882/883/884/885/886/887/888/889/890/891/892/893/894/895/896/897/898/899/900/901/902/903/904/905/906/907/908/909/910/911/912/913/914/915/916/917/918/919/920/921/922/923/924/925/926/927/928/929/930/931/932/933/934/935/936/937/938/939/940/941/942/943/944/945/946/947/948/949/950/951/952/953/954/955/956/957/958/959/960/961/962/963/964/965/966/967/968/969/970/971/972/973/974/975/976/977/978/979/980/981/982/983/984/985/986/987/988/989/990/991/992/993/994/995/996/997/998/999/1000	GLOBAL ENGINEERING SERVICES CONSULTING CIVIL & STRUCTURAL ENGINEERS HOUSE #10, 1ST FLOOR, STREET 7, CHAMAN ZAR COLONY, RAWALPINDI	ENGR. M.M YOUSAF REGISTERED ENGR. IN CIVIL M.A.S.C.E.U.S.A.I.C.E.	ARSLAN MUNIR SCALE: AS SHOWN DATE ISSUE: APRIL 2022

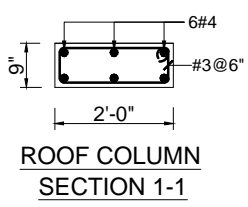




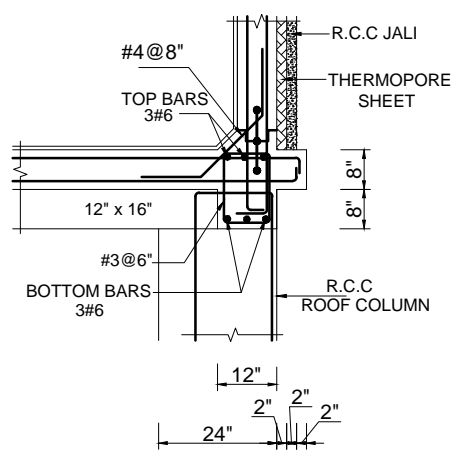
SECTION A-A



PLAN OF O.H. WATER TANK (BOTTOM SLAB)  
(CAPACITY 1,550 GALLONS)



ROOF COLUMN SECTION 1-1



SECTION 2-2 FOR  
O.H.T BOTTOM BEAM

TENDER DRAWING	REV.	REVISION	DATE	REV. PLAN		PROJECT	PROJECT TITLE	DRAWING TITLE	RESIDENT ARCHITECT			DRAWN BY: ARSLAN MUNIR SCALE: AS SHOWN DATE ISSUE: APRIL 2022	DRAWING NO: <b>S-24</b> 2022-03-1275
	NO.												

QUAID-E-AWAM  
UNIVERSITY OF ENGINEERING  
SCIENCES & TECHNOLOGY  
NAWABSHAH

SOFTWARE  
ENGINEERING DEPARTMENT

**PLUMBING DRAWINGS**  
(TENDER DRAWING)

CLIENT:  
QUEST NAWABSHAH

ARCHITECTS:

**NAQVI AND SIDDIQUIE**  
INC. ARCHITECTS & ENGINEERS  
LOWER GROUND FLOOR,  
I&T CENTER, PLOT NO: 61,  
STREET 14, SECTOR G-8/1,  
ISLAMABAD.



PLUMBING:

**GLOBAL ENGINEERING SERVICES**  
CONSULTING CIVIL & STRUCTURAL ENGINEERS  
HOUSE # NE 122/F, STREET 7,  
CHAMAN ZAR COLONY, RAWALPINDI

**QUAID-E-AWAM  
UNIVERSITY OF ENGINEERING  
SCIENCES & TECHNOLOGY  
NAWABSHAH**

**SOFTWARE  
ENGINEERING DEPARTMENT**

**LIST OF PLUMBING DRAWINGS**

P-01	GENERAL NOTES & LEGEND
P-02	GROUND FLOOR PLAN (Sewerage, Water Supply & Gas)
P-03	FIRST FLOOR PLAN (Sewerage, Water Supply & Gas)
P-04	ROOF PLAN SHOWING WATER SUPPLY DISTRIBUTION LINES
P-05	ROOF PLAN SHOWING STORM WATER DRAINAGE
P-06	DETAIL OF KITCHEN-1, TOILETS-1 & 2 GROUND FLOOR (Sewerage)
P-07	DETAIL OF TOILETS-3 & 4 GROUND FLOOR (Sewerage)
P-08	DETAIL OF TOILETS- 5 & 6 FIRST FLOOR (Sewerage)
P-09	DETAIL OF KITCHEN-2, TOILETS-7 & 8 FIRST FLOOR (Sewerage)
P-10	DETAIL OF TOILETS-9 & 10 FIRST FLOOR (Sewerage)
P-11	DETAIL OF KITCHEN-1, TOILETS-1 & 2 GROUND FLOOR (Water Supply)
P-12	DETAIL OF TOILETS-3 & 4 GROUND FLOOR (Water Supply)
P-13	DETAIL OF TOILETS- 5 & 6 FIRST FLOOR (Water Supply)
P-14	DETAIL OF KITCHEN-2, TOILETS-7 & 8 FIRST FLOOR (Water Supply)
P-15	DETAIL OF TOILETS-9 & 10 FIRST FLOOR (Water Supply)
P-16	DETAIL OF WATER & SEWER TRENCHES, MANHOLES & CHAMBERS

# GENERAL NOTES

- 1- PIPE PASSING THROUGH WALL, FLOOR OR ROOF, SHALL BE PROTECTED WITH SLEEVE.
- 2- CLEAN OUT OR ACCESS DOOR SHALL BE PROVIDED AT THE BASE OF ALL DRAINAGE STACK AND AT EACH FLOOR LEVEL.
- 3- DRAINAGE STACKS SHALL BE CONNECTED TO HORIZONTAL FIXTURE DRAIN PIPES BY 90° SWEEP TEE OR Y AND BEND OF 30°,45°,OR 60°
- 4- DRAINAGE STACKS SHALL BE CONNECTED TO UNDER GROUND DRAIN PIPE BY EITHER 90° LARGE/LONG RADIUS BEND OR TWO BENDS.
- 5- PIPE SIZES ARE IN INCHES.
- 6- PLUMBING SERVICES, SHALL BE CO-ORDINATED WITH OTHER SERVICES SUCH AS ELECTRICAL, AC, ETC TO AVOID CONFLICT OR INTERFERENCE WITH OTHER SERVICES.
- 7- SIZE OF FLOOR DRAIN UNLESS OTHERWISE STATED, SHALL BE SAME AS THE SIZE OF OUTLET DRAIN PIPE .
- 8- WHERE EVER FLOOR DRAIN TRAP IS SHOWN, SLOPE FLOOR TOWARDS DRAIN / TRAP.
- 9- ALL COLD AND HOT WATER PIPES SHALL BE OF G.I, MEDIUM / HEAVY, GRADE CONFORMING TO BRITISH STANDARD NO.1387. OR PPRC DADEX AS APPROVED.
- 10- ALL SOIL, WASTE, RAIN & VENT PIPES SHALL BE OF SPUN CAST IRON CONFORMING TO BRITISH STANDARD NO.416 OR uPVC CLASS "B" OF . DADEX AS APPROVED
- 11- ALL EXPOSED G.I PIPES ARE TO BE PROTECTED FROM DIRECT SUN SHINE /COLD BY INSULATION OF AEROFLEX.
- 12- ALL MS OR G.I PIPES TO BE LAID BELOW GROUND, ARE TO BE TREATED WITH A COAT OF BITUMEN & WRAPPED WITH HESSIAN CLOTH .
- 13- ALL HW /HWR PIPES TO BE INSULATED WITH AEROFLEX AND LAID AT A SUITABLE DISTANCE FROM CW PIPES.
- 14- ALL EXPOSED SURFACES OF CONCRETE IN CONTACT WITH SOIL FOR U.G. OR HARVESTING WATER TANK ARE TO BE TREATED BY BITUMEN & FELT. (BASE,WALLS & TOP SLAB).
- 15-MATERIAL STRENGTHS
  - (a) DEFORM STEEL GRADE-60
  - (b) R.C.C FOR U.G & O.H TANKS TO BE FAIR FACE FOR BASE & TOP WALL (1:1 1/2:3) WITH PUDLO AT 5lbs PER BAG OF CEMENT. HAVING CUBE STRENGTH 4,500 PSI AT 28 DAYS AGE.
  - (c) MAN HOLES R.C.C (1:2:4) CUBE STRENGTH 3,750 P.S.I.

ABRV	DESCRIPTION
	DIAMETER OF PIPE
CW	COLD WATER PIPE
HW	HOT WATER PIPE
CW/HW	COLD WATER / HOT WATER
SP	SOIL PIPE
WP	WASTE PIPE
VP	VENT PIPE
T/A	TO ABOVE
F/A	FROM ABOVE
F/B	FROM BLEOW
W/S	WASTE STACK
S/S	SOIL STACK
V/S	VENT STACK
EWH	ELECTRIC WATER HEATER
GWH	GAS WATER HEATER
RWP	RAIN WATER PIPE
AFC	ABOVE FALSE CEILING
WC	WATER CLOSET
U.G	UNDER GROUND
O.H	OVER HEAD
B/G	BELOW GROUND
B/F	BELOW FLOOR
T/B	TO BELOW
L/L	LOW LEVEL
H/L	HIGH LEVEL
M.H	MAN HOLE
W.CH	WATER CHAMBER
G.CH	GAS CHAMBER
A.V	AIR VALVE
N.T.S	NOT TO SCALE
GP	GAS PIPE
GC	GAS COCK
FP	FIRE PIPE
FC	FIRE CABINET
FH	FIRE HYDRANT
EWC	ELECTRIC WATER COOLER
B/C	BELOW CEILING
A/C	ABOW CEILING

## LEGEND

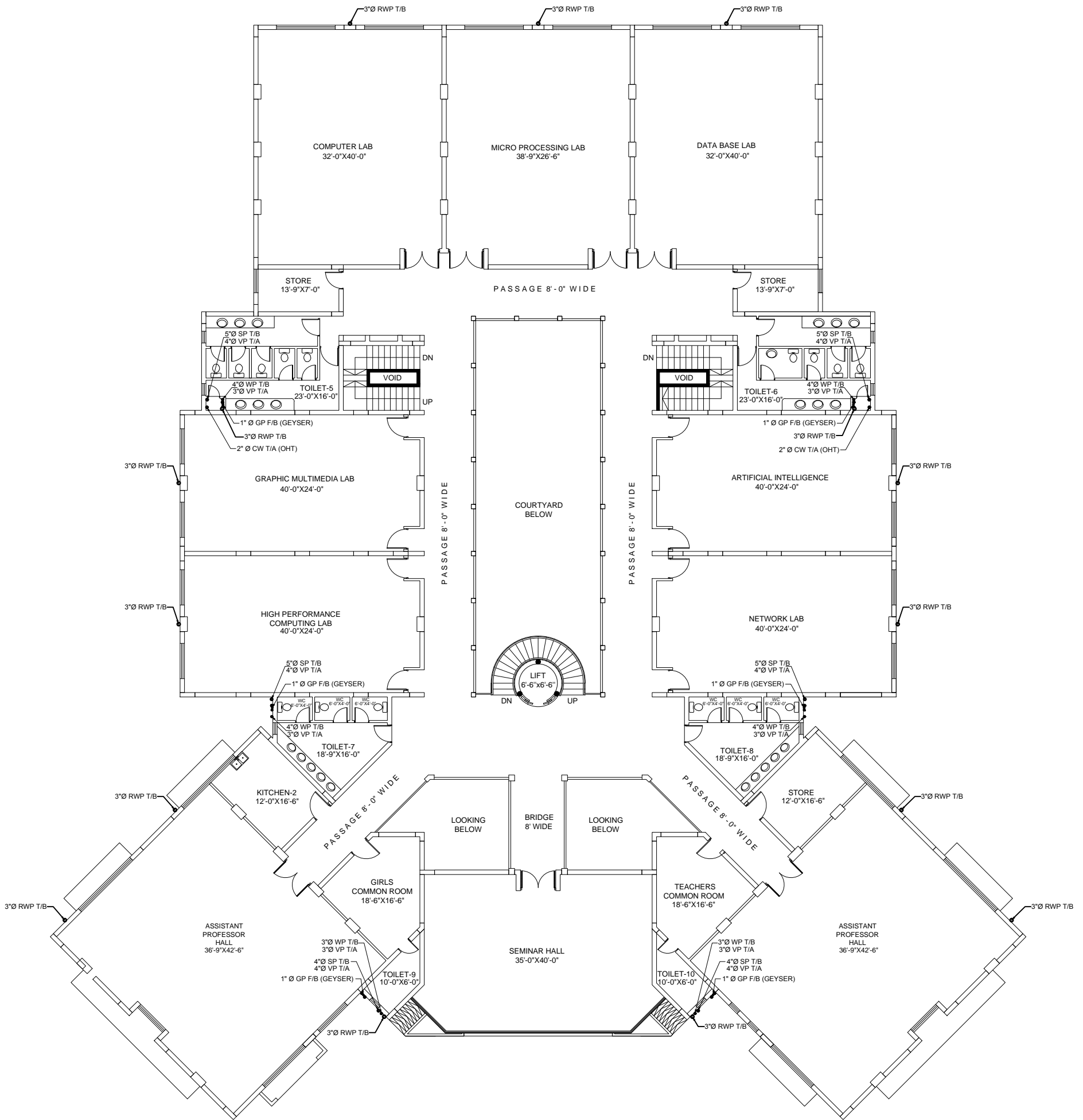
	COLD WATER PIPE
	HOT WATER PIPE
	SOIL PIPE
	WASTE PIPE
	VENT PIPE
	GATE VALVE ON HORIZONTAL
	WATER TAP
	FLOOR DRAIN WITH TRAP
	FLOOR CLEAN OUT
	PIPE RISER WITH BEND
	DIRECTION OF FLOW
	FLOOR TRAP
	CLEANOUT IN THE FALSE CEILING
	GATE VALVE ON VERTICAL PIPE
	MUSLIM SHOWER
	FIRE HOUSE CABINET
	PRESSURE REDUCING VALVE
	FLOAT VALVE
	CHECK VALVE OR NON- RETURN VALVE
	STRAINER
	SIMSESE TWIN FITTING
	GULLY TRAP
	GREASE TRAP

## SPECIAL NOTES:


- 1- ALL R.C.C PIPES WILL CONFORM TO RESPECTIVE ASTM SPECIFICATION C 76-89 STANDARD SPECIFICATION FOR REINFORCED CONCRETE PIPES CLASS-3, WITH WALL C.
- 2- CONCRETE MIX 1:1-1/2:3 WITH MINIMUM CUBE CRUSHING STRENGTH OF 4,500 PSI.
- 3- ALL PIPES TO BE JOINTED AS PER ASTM STANDARD BY PROVIDING SPIGET-SOCKET OR COLLAR JOINTS AS APPROVED.
- 4- DEFORM STEEL GRADE-40 TO BE USED BOTH FOR LONG & HOOP BARS.
- 5- ALL PVC PIPES WILL CONFIRM TO B.S.S SPECIFICATION FOR CLASS B & D AS REFERRED.

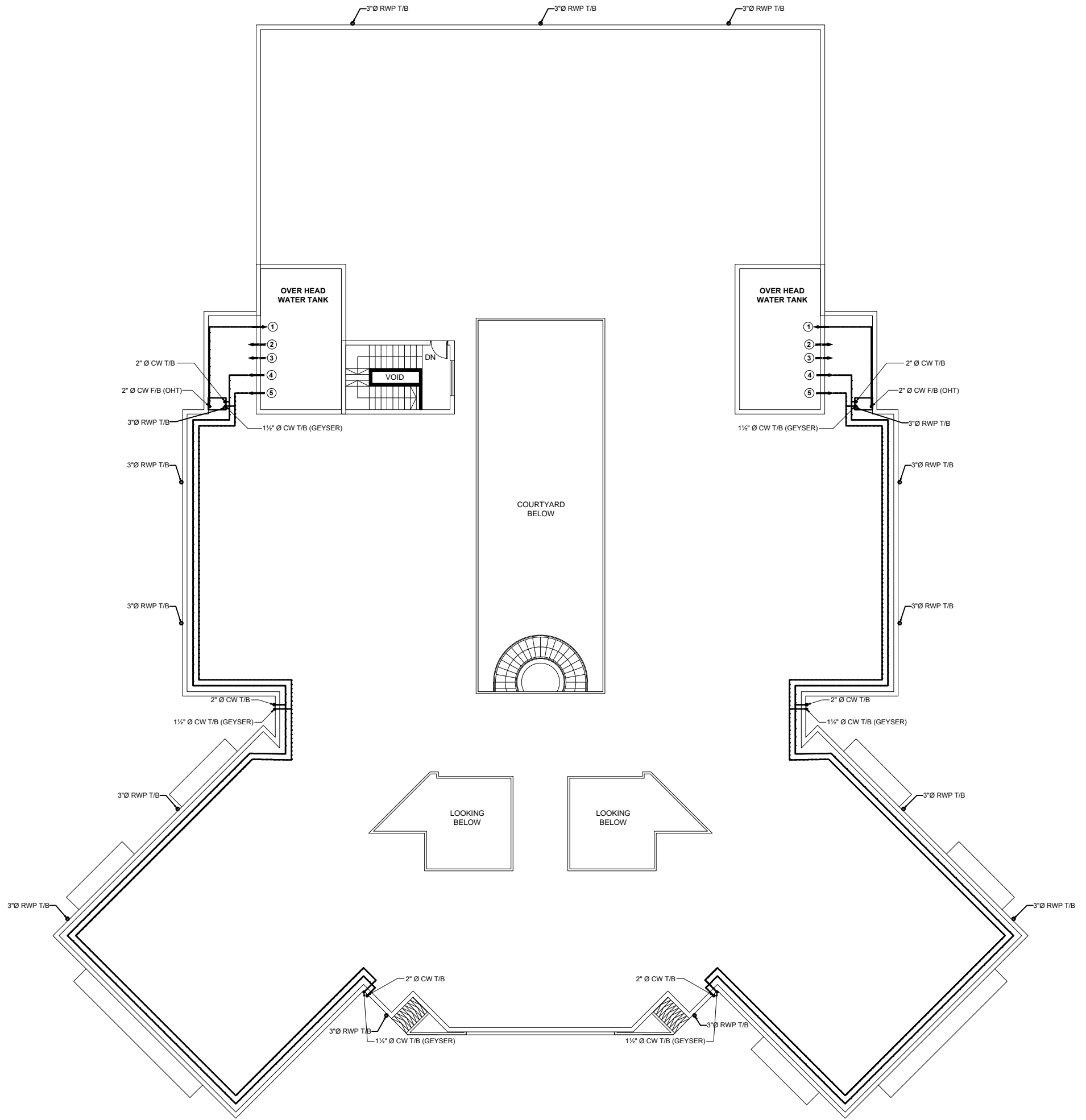
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					QUAID-E-AWAM UNIVERSITY OF ENGINEERING SCIENCES & TECHNOLOGY NAWABSHAH	Environmental Engineering Department	GENERAL NOTES & LEGEND		NAQVI AND SIDDIQUIE	GLOBAL ENGINEERING SERVICES	MUDASSAR HUSSAIN	P-01
									CONSULTING CIVIL & STRUCTURAL ENGINEERS	HOUSE #10, USF, STREET 7, CHANAY ZAR COLONY, RAWALPINDI	AS SHOWN	2022-03-12/25
									ENGR. M.M YOUSAF	M.Sc. STRUCT. ENGR. (M. ENR) M.ASCE (U.S.A.I.C.E.)		DATE ISSUE: APRIL 2022





**FIRST FLOOR PLAN**  
(Sewerage, Water Supply & Gas)

TENDER DRAWING	REV.	REVISION	DATE	BY		PROJECT QUAID-E-AWAM UNIVERSITY OF ENGINEERING SCIENCES & TECHNOLOGY NAWABSHAH	PROJECT TITLE Software Engineering Department	DRAWING TITLE FIRST FLOOR PLAN (Sewerage, Water Supply & Gas)	RESIDENT ARCHITECT  PREKSHADA MASROOR RANA SIDDIQUIE	ARCHITECT <b>NAQVI AND SIDDIQUIE</b> ARCHITECTS & ENGINEERS HOUSE #10, 1ST FLOOR, MAIN CAMPUS SECTOR G-7/A, ISLAMABAD	CONSULTING <b>GLOBAL ENGINEERING SERVICES</b> CONSULTING CIVIL & STRUCTURAL ENGINEERS HOUSE #10, 1ST FLOOR, MAIN CAMPUS COLONY, RAWALPINDI	DRAWN BY MUDASSAR HUSSAIN SCALE AS SHOWN	DRAWING NO. <b>P-03</b> 2022-03-1275
	CHECKED BY	ENGR. M.M YOUSAF MICROSTRUCT ENGRG. M.I. EMBAY MASCEUS SAJICE		DATE ISSUE									

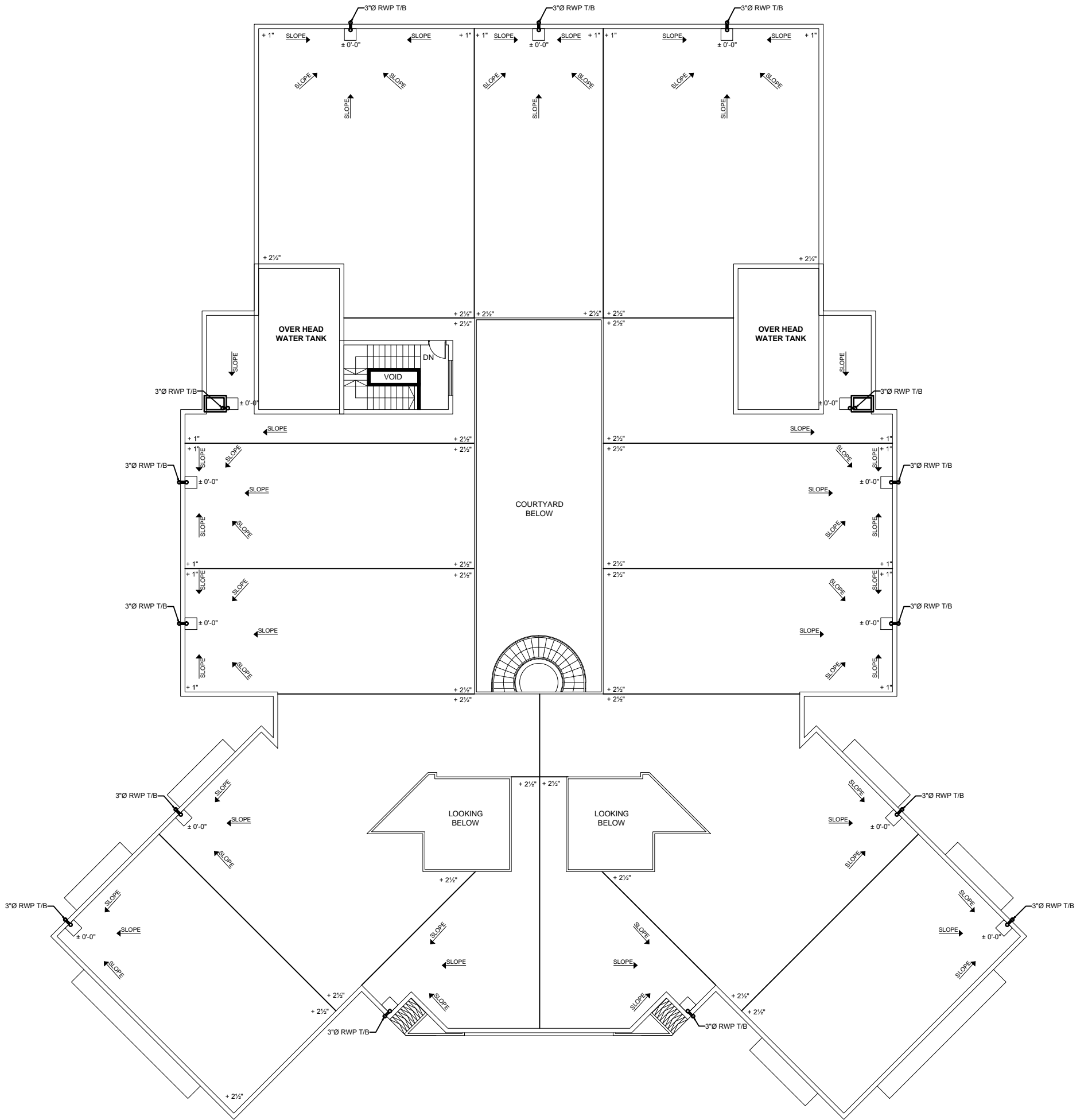


**ROOF PLAN SHOWING WATER SUPPLY DISTRIBUTION LINES**

**LEGEND**

- ① 2" Ø INFLOW (TOP) FROM WATER MAIN
- ② 3" Ø OVER FLOW (TOP)
- ③ 3" Ø DRAIN (BOTTOM)
- ④ 2" Ø OUT FLOW (BOTTOM)
- ⑤ 1½" Ø OUT FLOW (BOTTOM) (GEYSER)

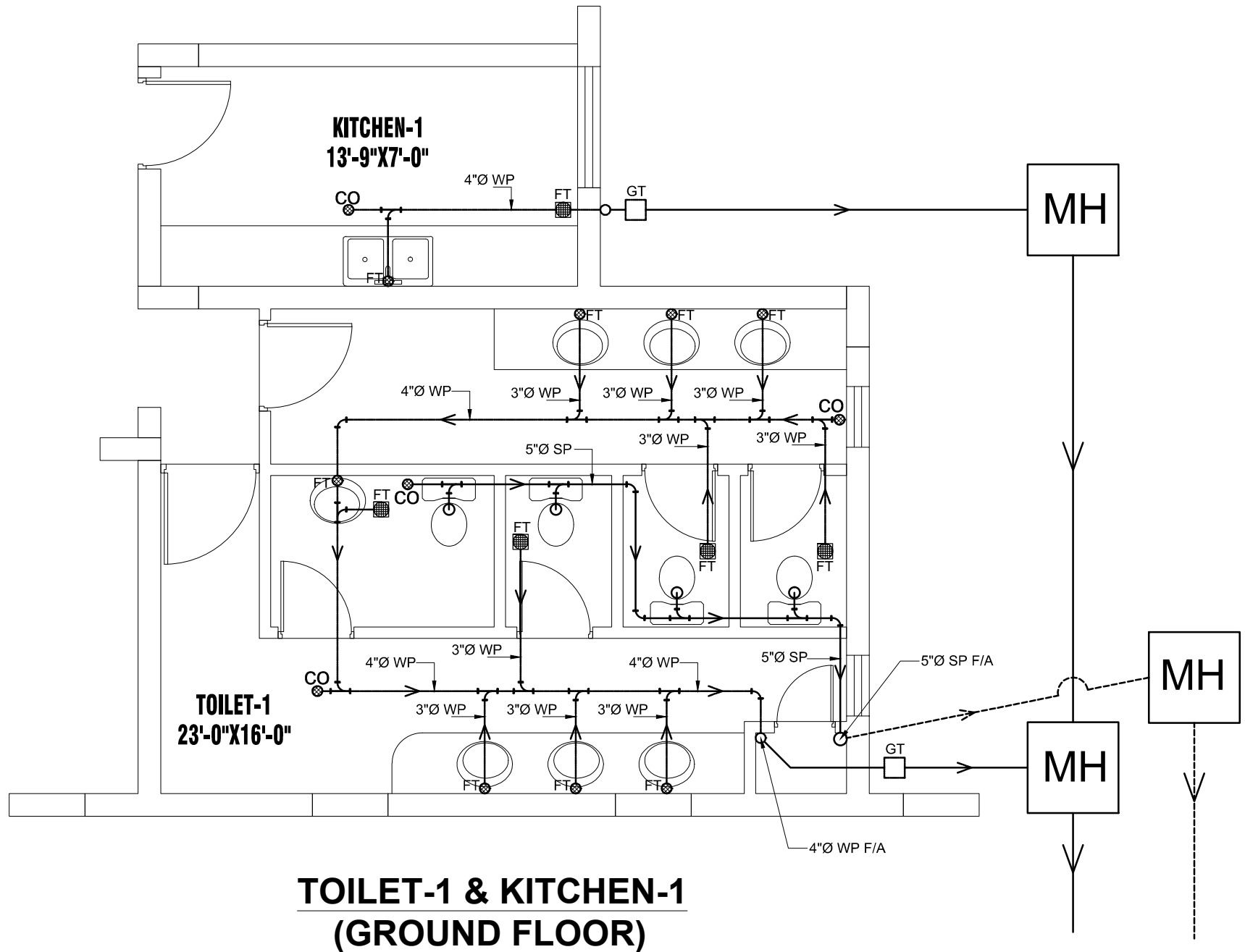
TENDER DRAWING	REV.	REVISION	DATE		<b>PROJECT</b> QUAID-E-AWAM UNIVERSITY OF ENGINEERING SCIENCES & TECHNOLOGY NAWABSHAH	<b>PROJECT TITLE</b> Software Engineering Department	<b>DRAWING TITLE</b> ROOF PLAN SHOWING WATER SUPPLY DISTRIBUTION LINES	<b>RESIDENT ARCHITECT</b> PREERAZA MASROOR RAZA SIDDIQUIE	<b>ARCHITECT</b> NAQVI AND SIDDIQUIE HOUSE #101, STREET 7, CHANAY ZAR COLONY, RAWALPINDI	<b>ENGINEERING</b> GLOBAL ENGINEERING SERVICES CONSULTING CIVIL & STRUCTURAL ENGINEERS HOUSE #101, STREET 7, CHANAY ZAR COLONY, RAWALPINDI	<b>DRAWN BY</b> MUDASSAR HUSSAIN SCALE AS SHOWN	<b>DRAWING NO.</b> P-04 2022-03-1275
	ENGR. SKIN	<b>CHECKED BY</b> ENGR. M.M YOUSAF M.Sc. STRUCT. ENGRG. M. ENGRG. MASCE/US/ALICE	<b>DATE ISSUE:</b> APRIL 2022									



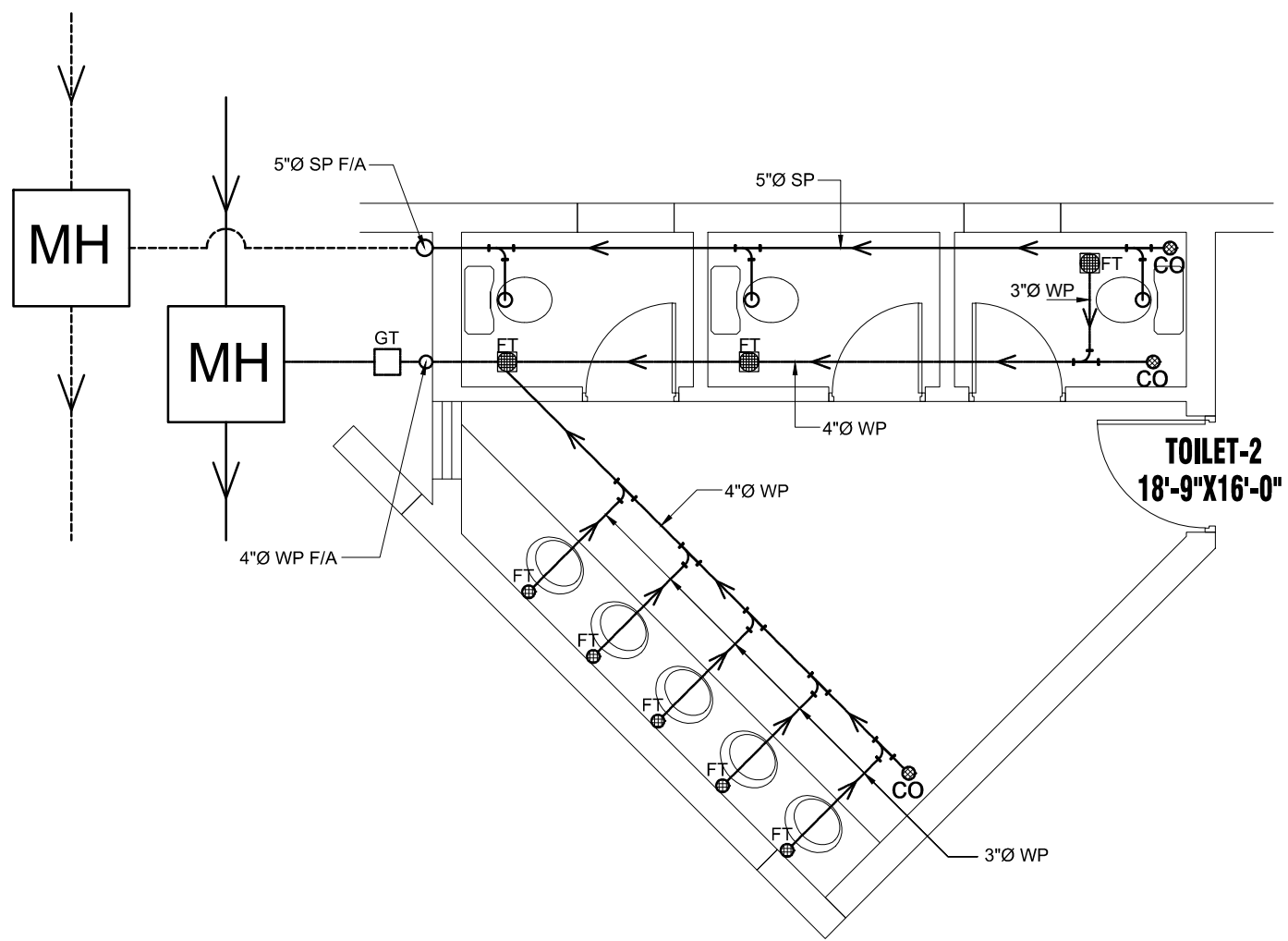
**ROOF PLAN SHOWING STORM WATER DRAINAGE**

TENDER DRAWING	REV.	REVISION	DATE		<b>PROJECT</b> QUAID-E-AWAM UNIVERSITY OF ENGINEERING SCIENCES & TECHNOLOGY NAWABSHAH	<b>PROJECT TITLE</b> Software Engineering Department	<b>DRAWING TITLE</b> ROOF PLAN SHOWING STORM WATER DRAINAGE	<b>RESIDENT ARCHITECT</b> PREERAZA MASROOR RAZA SIDDIQUIE	<b>ARCHITECT</b> NAQVI AND SIDDIQUIE CONSULTING CIVIL & STRUCTURAL ENGINEERS HOUSE #101, STREET 7, CHAMAN ZAR COLONY, RAWALPINDI SECTOR G-7/A, ISLAMABAD ENGR SKIN:	<b>CLIENT</b> GLOBAL ENGINEERING SERVICES CONSULTING CIVIL & STRUCTURAL ENGINEERS HOUSE #101, STREET 7, CHAMAN ZAR COLONY, RAWALPINDI	<b>DRAWN BY</b> MUDASSAR HUSSAIN SCALE AS SHOWN	<b>DRAWING NO.</b> P-05 2022-03-12/25
	ENGR. M.M YOUSAF MICROSTRUCT ENGR. M. EMMAN M.ASCE/US.A.I.C.E.	DATE ISSUE: APRIL 2022										



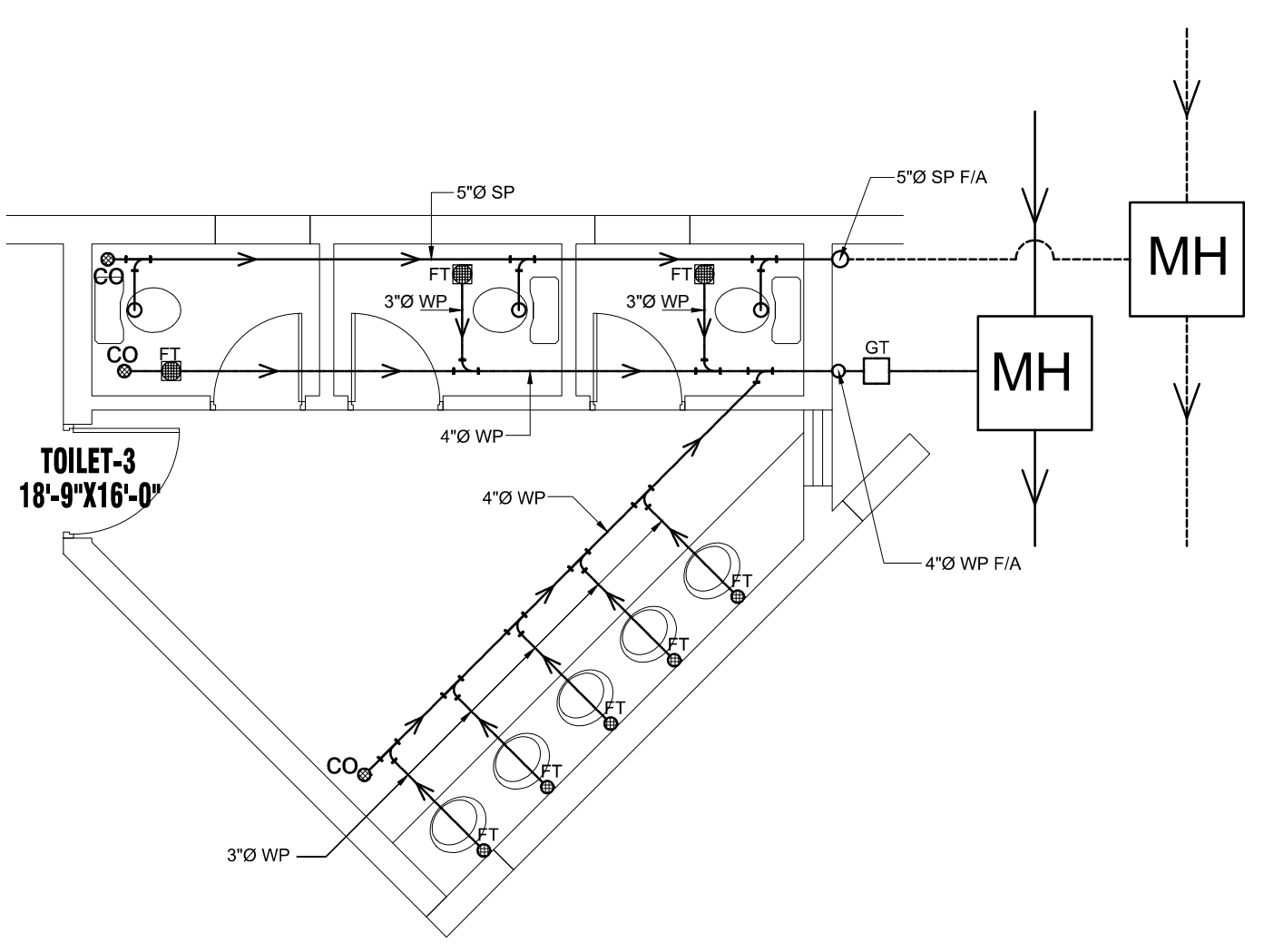


**TOILET-1 & KITCHEN-1  
(GROUND FLOOR)**

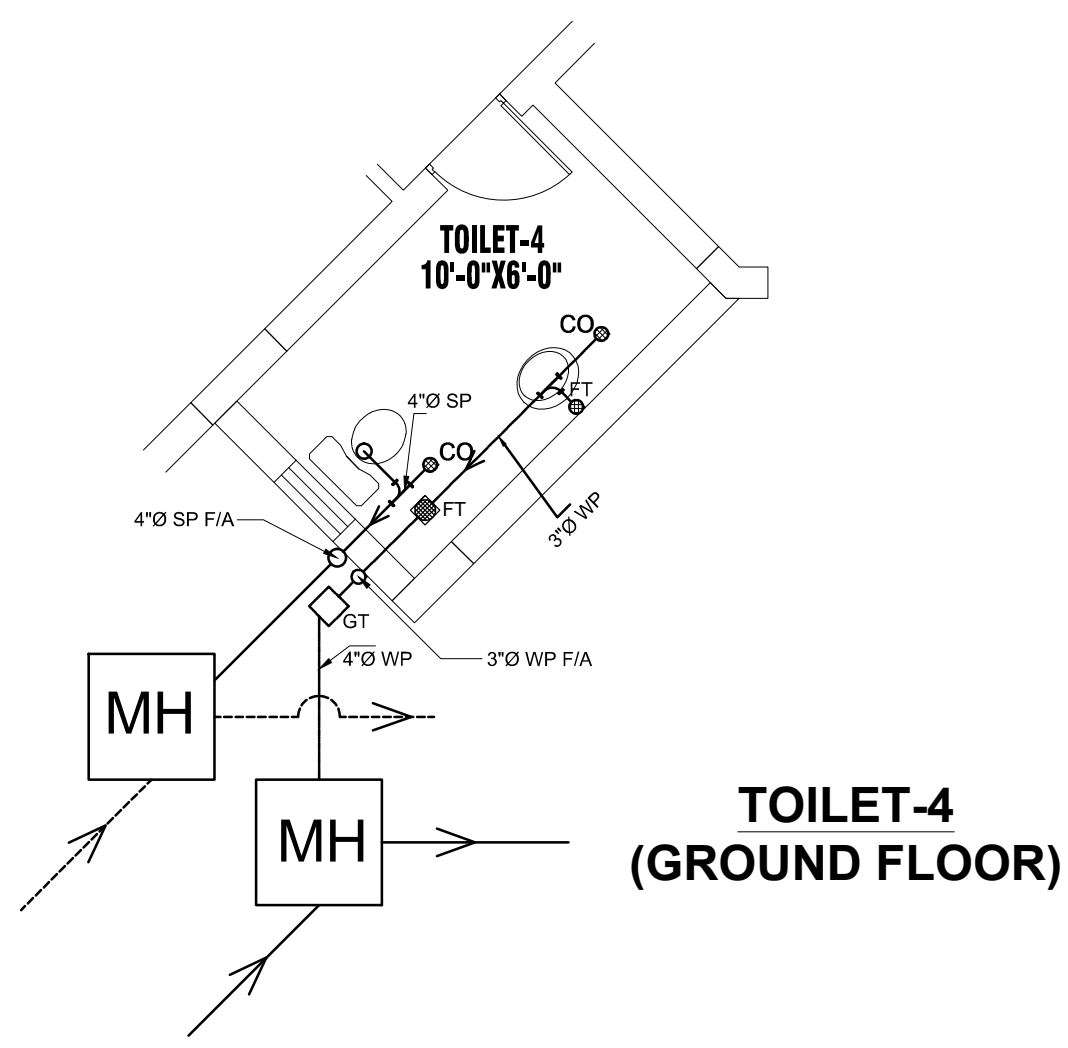


**TOILET-2  
(GROUND FLOOR)**

TENDER DRAWING	S.NO.	REVISOR	DATE	REV. PLAN	PROJECT	PROJECT TITLE	DRAWING TITLE	RESIDENT ARCHITECT	ARCHITECT	ENGINEERING	DRAWN BY	DRAWING NO.
					QUAID-E-AWAM UNIVERSITY OF ENGINEERING SCIENCES & TECHNOLOGY, NAWABSHAH	Software Engineering Department	DETAIL OF KITCHEN-1, TOILETS-1 & 2 GROUND FLOOR (SEWERAGE)		NAQVI AND SIDDIQUIE	GLOBAL ENGINEERING SERVICES	MUDASSAR HUSSAIN	P-06
									ENGR. M.M. YOUSAF			2022-03-12/25
												DATE ISSUE: APRIL 2022

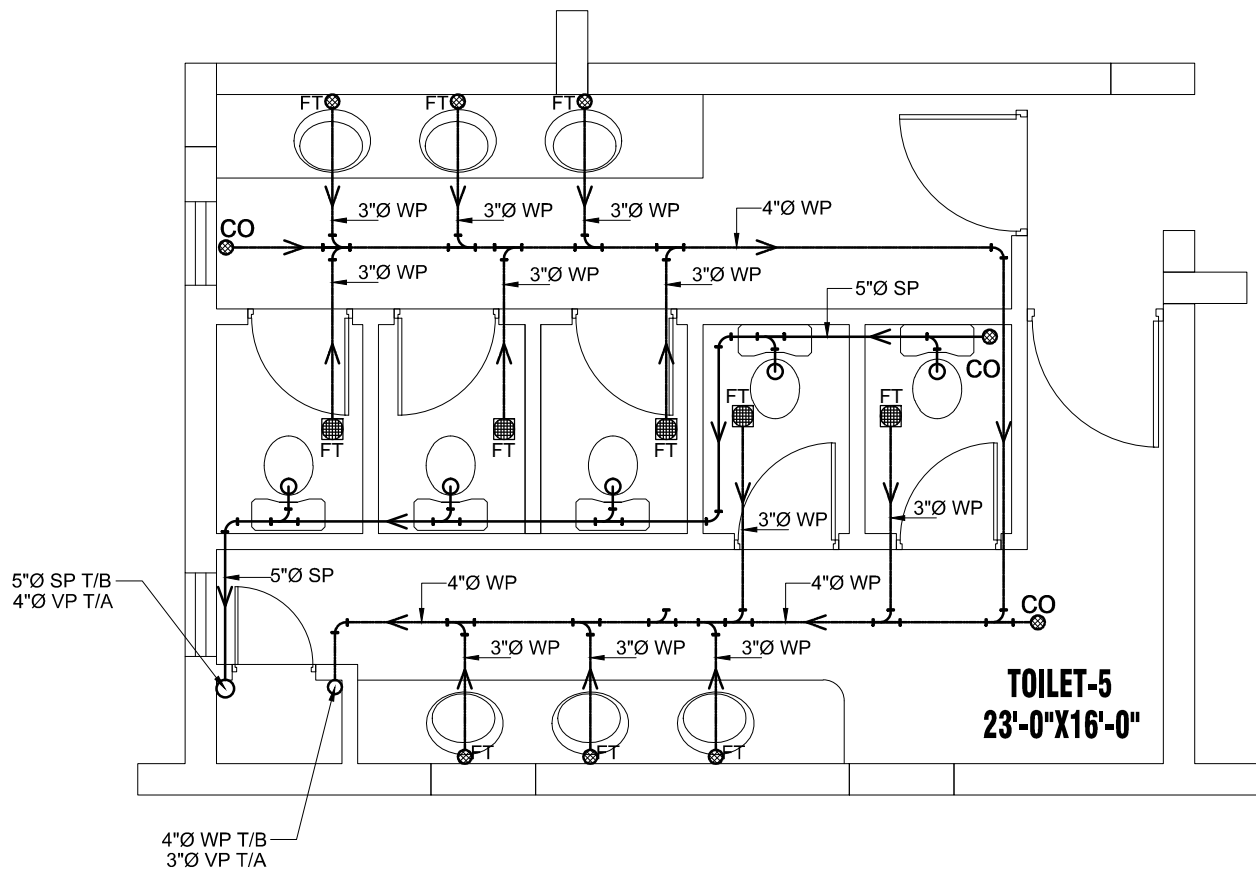


**TOILET-3  
(GROUND FLOOR)**

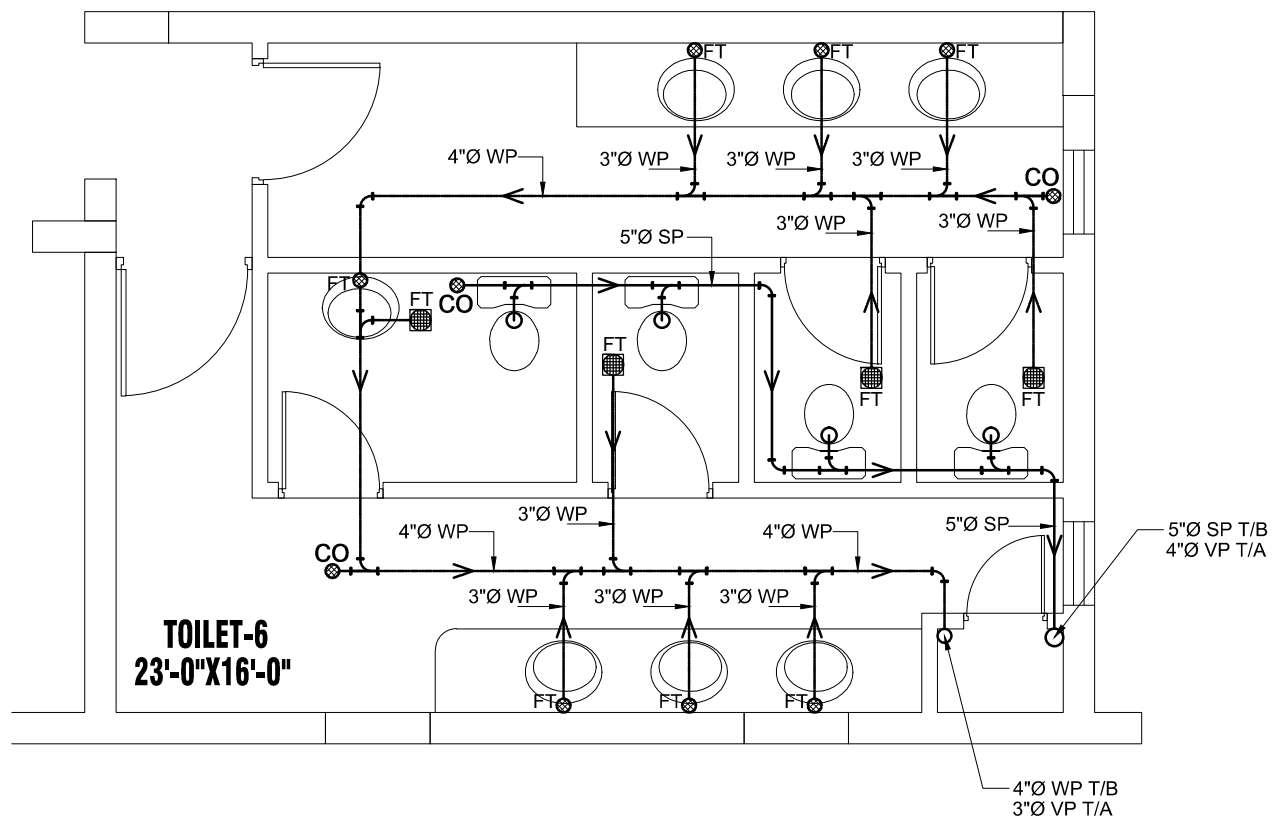


**TOILET-4  
(GROUND FLOOR)**

TENDER DRAWING	NO.	REVISION	DATE		<b>PROJECT</b> QUAID-E-AWAM UNIVERSITY OF ENGINEERING SCIENCES & TECHNOLOGY NAWABSHAH	<b>PROJECT TITLE</b> Software Engineering Department	<b>DRAWING TITLE</b> DETAIL OF TOILETS 3 & 4 GROUND FLOOR (SEWERAGE)	<b>RESIDENT ARCHITECT</b>  PREERAZA MASROOR RASA SIDDIQUE	<b>ARCHITECT</b> <b>NAQVI AND SIDDIQUE</b> CONSULTING CIVIL & STRUCTURAL ENGINEERS HOUSE #10, 1ST FLOOR, CHANAY ZAR COLONY, RAWALPINDI SECTOR 6-7/A, ISLAMABAD <b>ENGR SKIN</b>	<b>FLUISING</b> <b>GLOBAL ENGINEERING SERVICES</b> CONSULTING CIVIL & STRUCTURAL ENGINEERS HOUSE #10, 1ST FLOOR, CHANAY ZAR COLONY, RAWALPINDI	<b>DRAWN BY</b> MUDASSAR HUSSAIN <b>SCALE</b> AS SHOWN	<b>DRAWING NO.</b> <b>P-07</b> 2022-03-1275
	<b>CHECKED BY</b> ENGR. M.M YOUSAF MSc(STRUCT ENGR), M.Eng(ENR) MASCE(U.S.A.I.C.E.)	<b>DATE ISSUE:</b> APRIL 2022										

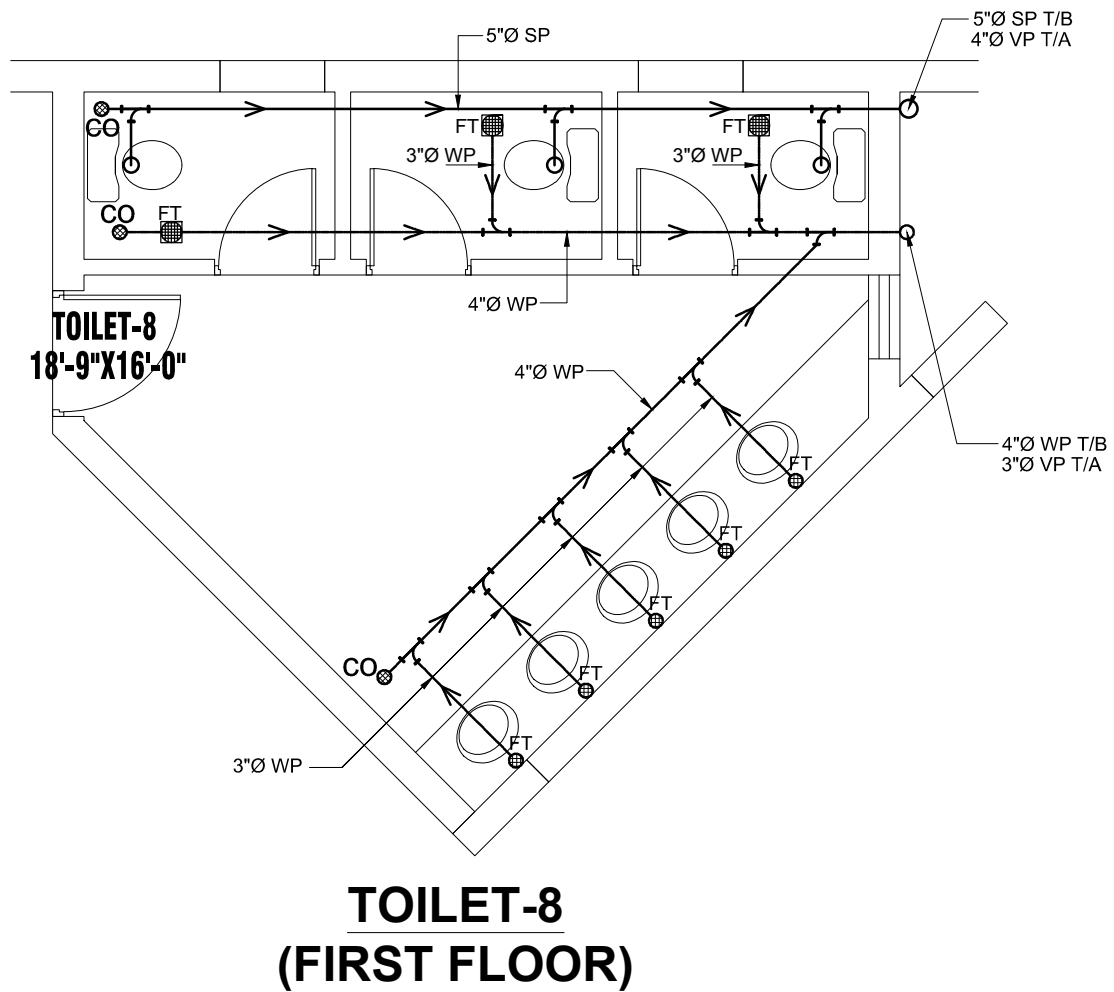
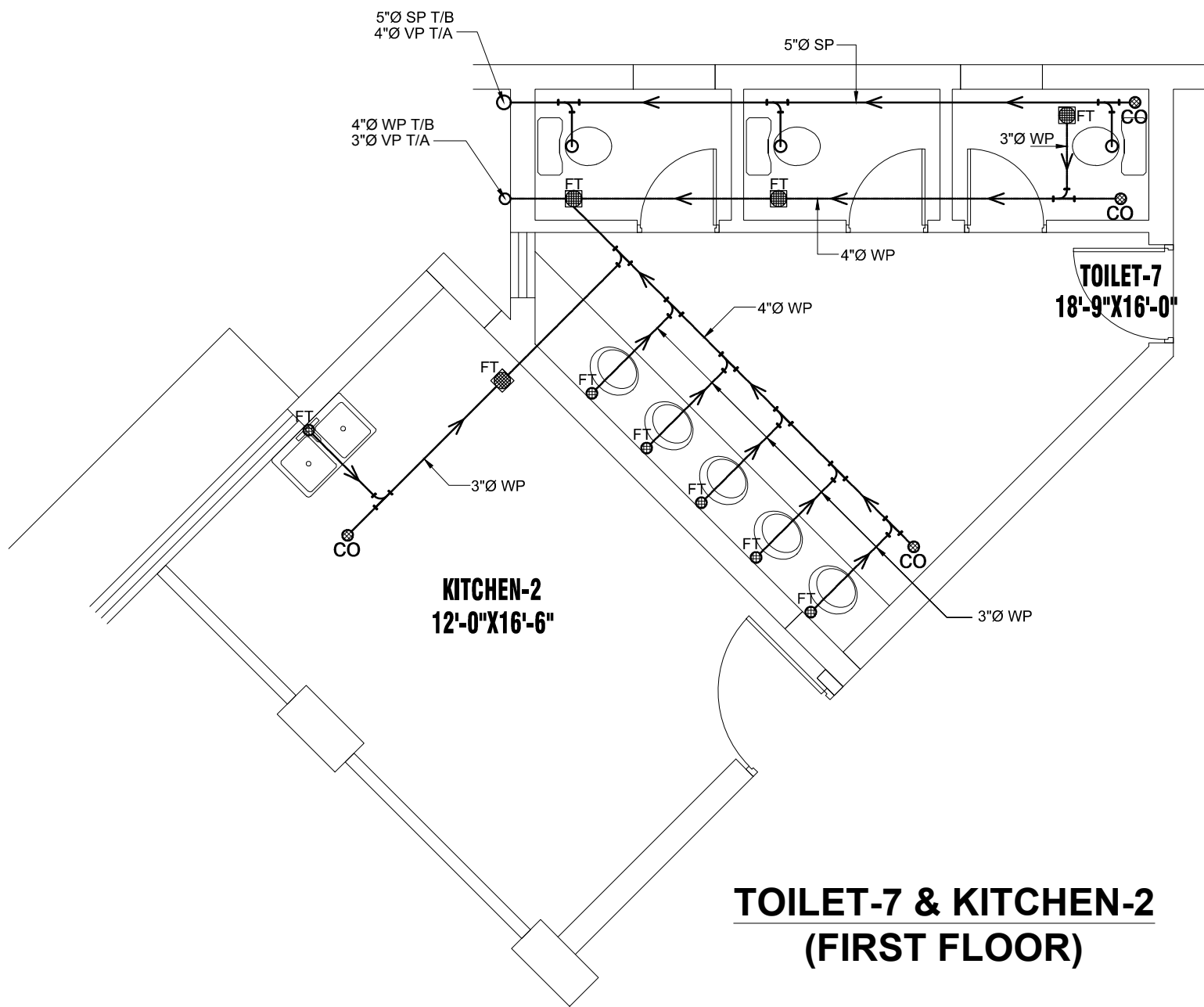


**TOILET-5  
(FIRST FLOOR)**

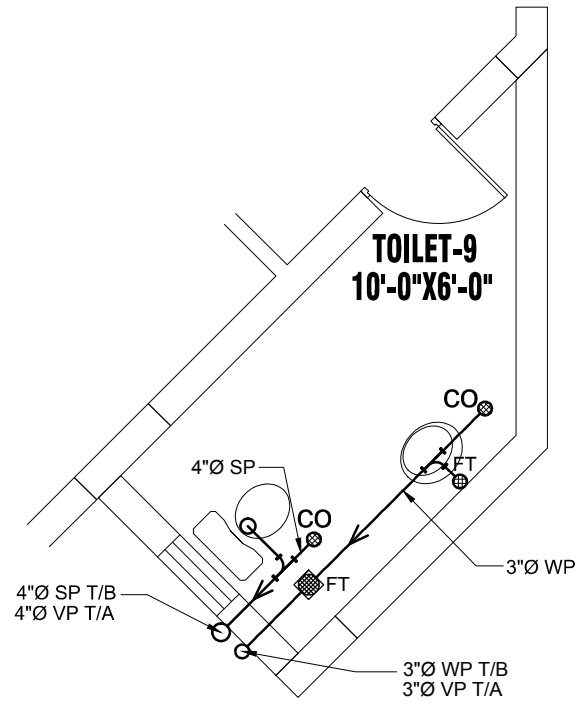


**TOILET-6  
(FIRST FLOOR)**

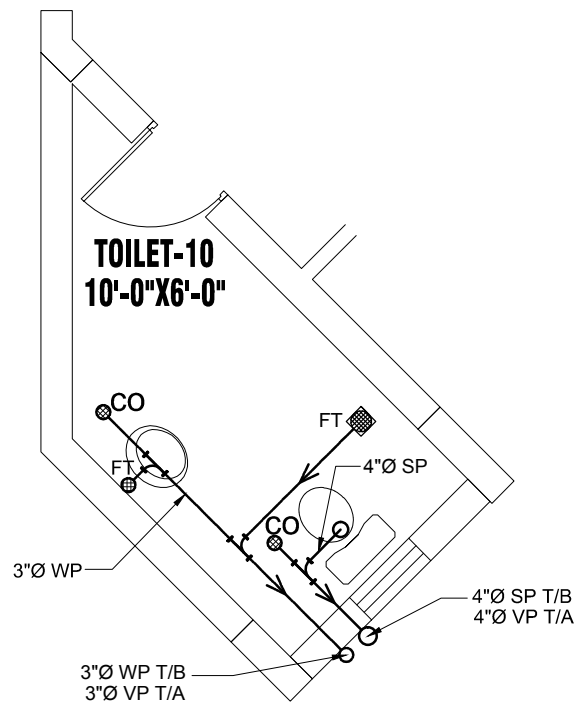
TENDER DRAWING	S.NO.	REVISION	DATE	REV. PLAN	PROJECT	PROJECT TITLE	DRAWING TITLE	RESIDENTY ARCHITECT	ARCHITECT	ENGINEER	SCALE	DRAWING NO.
					QUAID-E-AWAM UNIVERSITY OF ENGINEERING SCIENCES & TECHNOLOGY NAWABSHAH	Software Engineering Department	DETAIL OF TOILETS 5 & 6 FIRST FLOOR (SEWERAGE)		NAQVI AND SIDDIQUIE	GLOBAL ENGINEERING SERVICES	AS SHOWN	P-08
									ENGR. M.M. YOUSAF			2022-03-12/25
												DATE ISSUE: APRIL 2022



TENDER DRAWING	S.NO.	REVISOR	DATE	REV. PLAN	PROJECT	PROJECT TITLE	DRAWING TITLE	RESIDENTY ARCHITECT	ARCHITECT	PLUMBING	DRAWN BY	DRAWING NO.
					QUAID-E-AWAM UNIVERSITY OF ENGINEERING SCIENCES & TECHNOLOGY NAWABSHAH	Software Engineering Department	DETAIL OF KITCHEN-2, TOILETS-7 & 8 FIRST FLOOR (SEWERAGE)		NAQVI AND SIDDIQUI CONSULTING CIVIL & STRUCTURAL ENGINEERS HOUSE #16, 15/F, STREET 7, CHAMAN ZAR COLONY, RAWALPINDI SECTOR 6-7/A, ISLAMABAD	GLOBAL ENGINEERING SERVICES CONSULTING CIVIL & STRUCTURAL ENGINEERS HOUSE #16, 15/F, STREET 7, CHAMAN ZAR COLONY, RAWALPINDI	MUDASSAR HUSSAIN	P-09
											ENGR. M.M YOUSAF REGISTERED ENGR. M. ENGRY M.ASCE/US.A.I.C.E.	2022-03-12/25
												DATE ISSUE: APRIL 2022

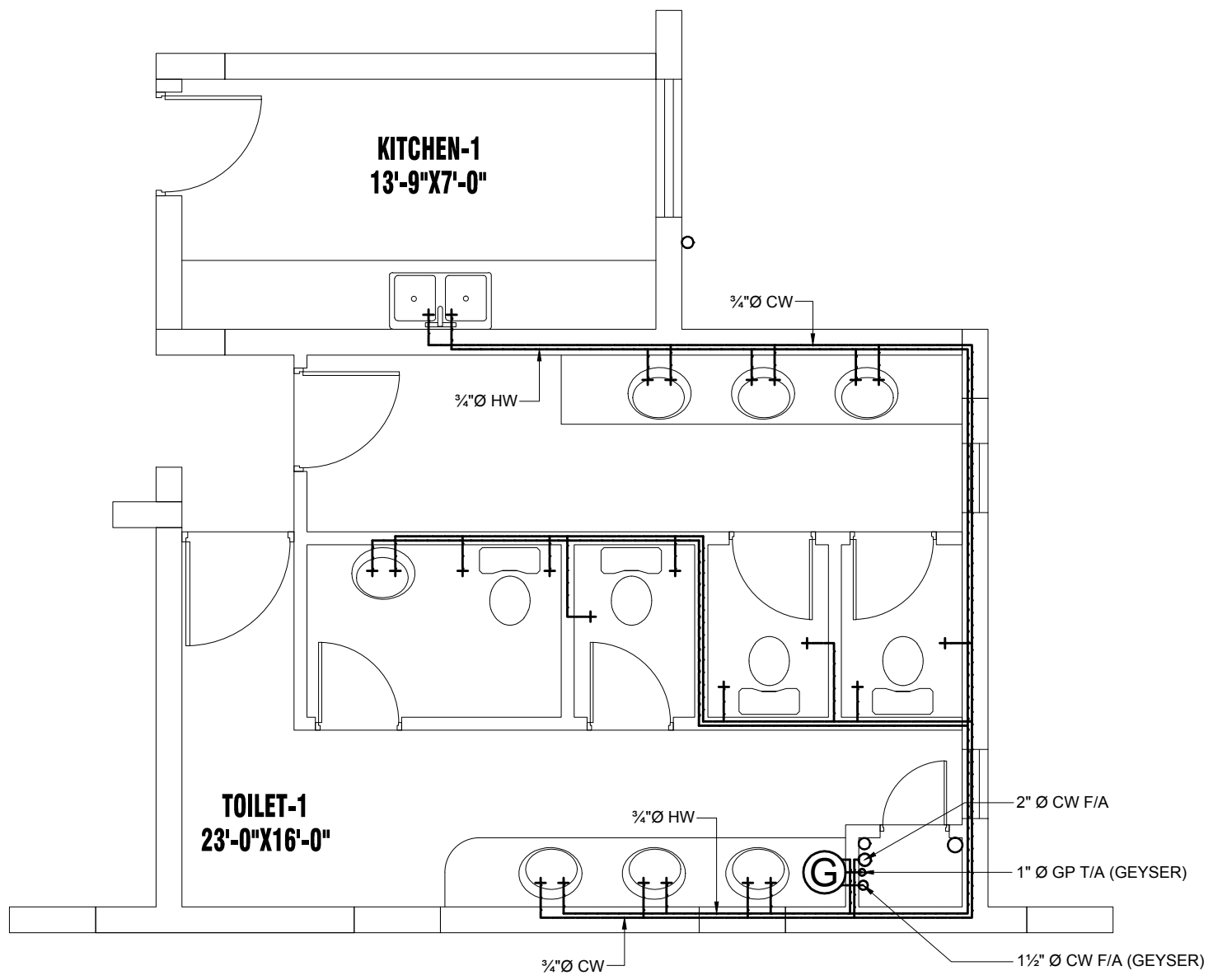


**TOILET-9  
(FIRST FLOOR)**

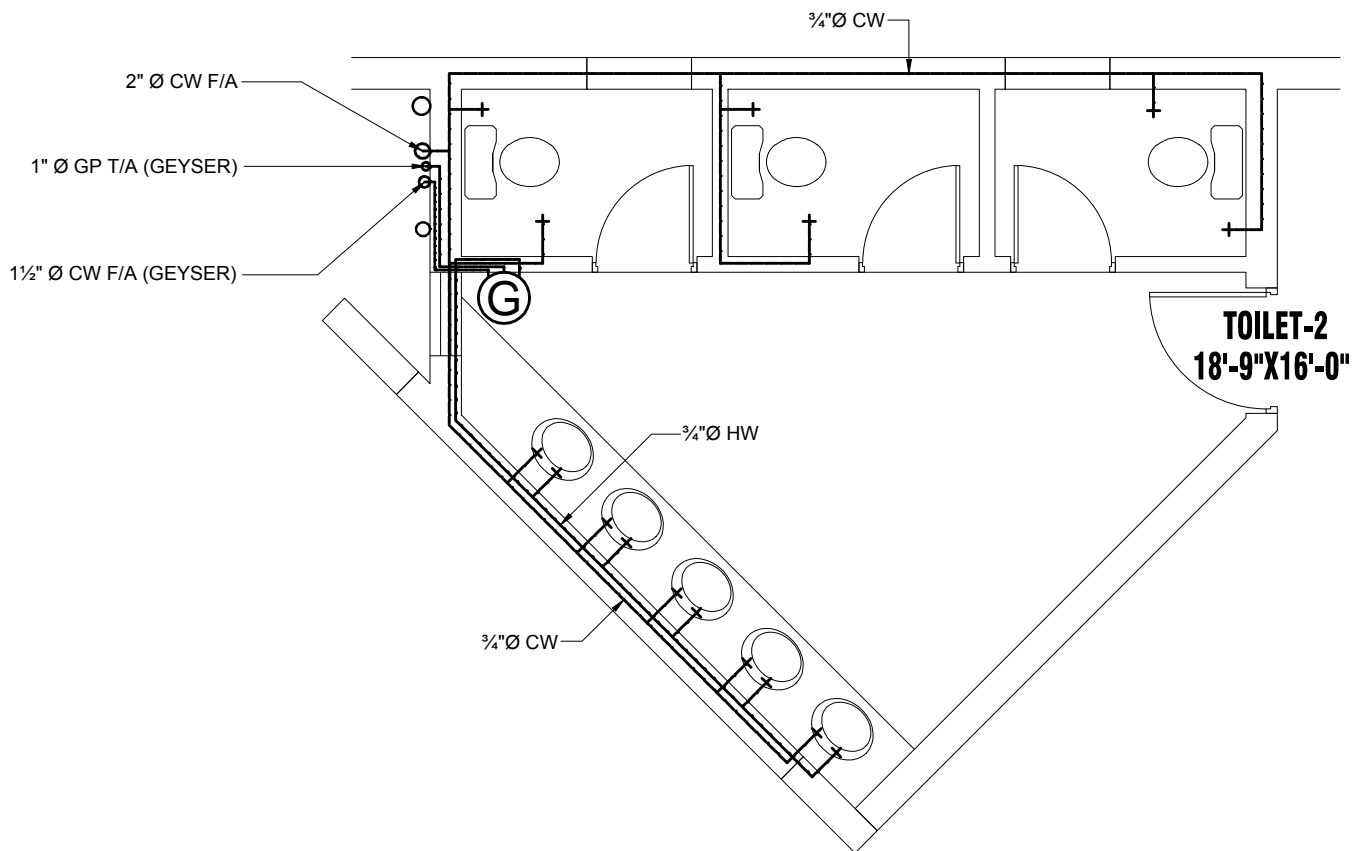


**TOILET-10  
(FIRST FLOOR)**


TENDER DRAWING	REV.	REVISION	DATE		<b>PROJECT</b> QUAID-E-AWAM UNIVERSITY OF ENGINEERING SCIENCES & TECHNOLOGY NAWABSHAH	<b>PROJECT TITLE</b> Software Engineering Department	<b>DRAWING TITLE</b> DETAIL OF TOILETS-9 & 10 FIRST FLOOR (SEWERAGE)	<b>RESIDENT ARCHITECT</b>  PREERAZA MASROOR RASA SIDDIQUE	<b>ARCHITECT</b> <b>NAQVI AND SIDDIQUE</b> CONSULTING CIVIL & STRUCTURAL ENGINEERS HOUSE #16, 15/F, STREET 7, CHAMAN ZAR COLONY, RAWALPINDI SECTOR 6-7/A, ISLAMABAD <b>ENGR SKIN</b>	<b>FLUISING</b> GLOBAL ENGINEERING SERVICES CONSULTING CIVIL & STRUCTURAL ENGINEERS HOUSE #16, 15/F, STREET 7, CHAMAN ZAR COLONY, RAWALPINDI CHECKED BY: ENGR. M.M YOUSAF M.ScE/STRUCT ENGR/ M. ENGR/ M. ARSCE/US.A.I.C.E.	DRAWN BY: MUDASSAR HUSSAIN SCALE: AS SHOWN	DRAWING NO: <b>P-10</b> 2022-03-12/75
	DATE ISSUE: APRIL 2022											

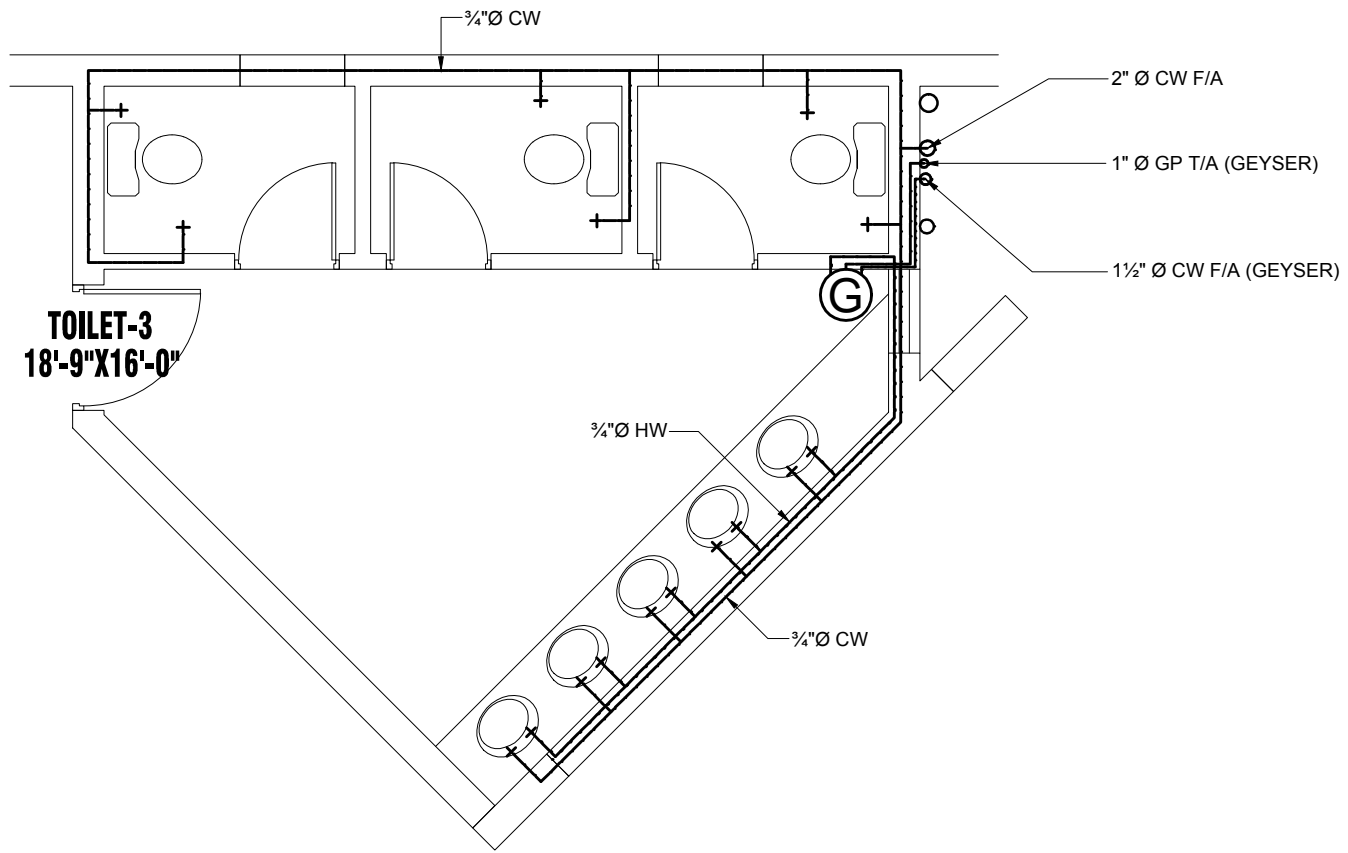


**TOILET-1 & KITCHEN-1  
(GROUND FLOOR)**

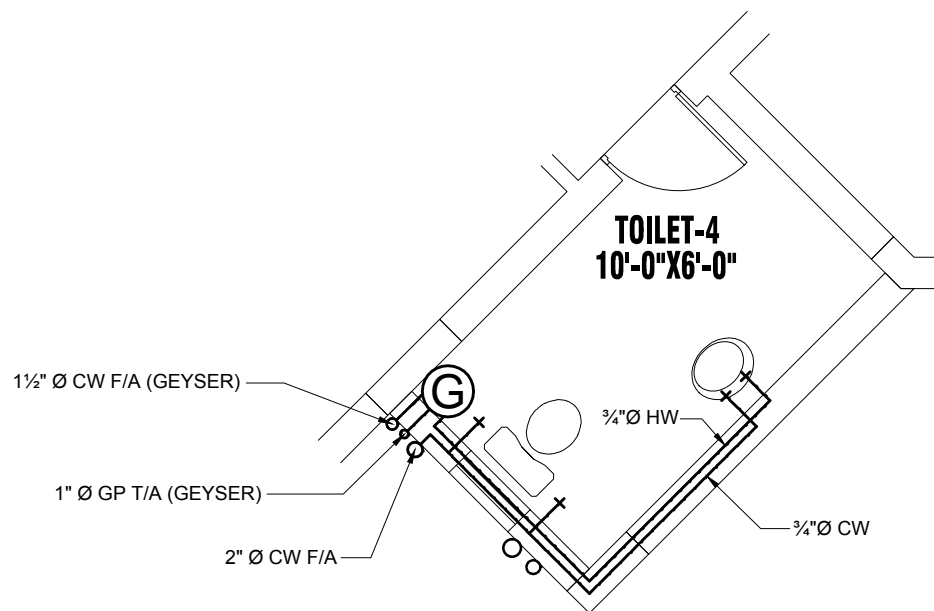


**TOILET-2  
(GROUND FLOOR)**

TENDER DRAWING	REV.	REVISION	DATE		<b>PROJECT</b> QUAID-E-AWAM UNIVERSITY OF ENGINEERING SCIENCES & TECHNOLOGY NAWABSHAH	<b>PROJECT TITLE</b> Software Engineering Department	<b>DRAWING TITLE</b> DETAIL OF KITCHEN-1, TOILETS-1 & 2 GROUND FLOOR (WATER SUPPLY)	<b>RESIDENT ARCHITECT</b>  PREERAZA MASROOR RASA SIDDIQUE	<b>ARCHITECT</b> <b>NAQVI AND SIDDIQUE</b> CONSULTING CIVIL & STRUCTURAL ENGINEERS HOUSE #16, 1ST FLOOR, 1ST CROSS SECTOR G-7/A, ISLAMABAD <b>ENGR SKIN</b>	<b>ENGINEERING</b> <b>GLOBAL ENGINEERING SERVICES</b> CONSULTING CIVIL & STRUCTURAL ENGINEERS HOUSE #16, 1ST FLOOR, 1ST CROSS COLONY, RAWALPINDI	<b>DRAWN BY:</b> MUDASSAR HUSSAIN <b>SCALE:</b> AS SHOWN	<b>DRAWING NO:</b> <b>P-11</b> 2022-03-1275
	<b>CHECKED BY:</b> ENGR. M.M YOUSAF M.Sc.STRUCT. ENGR. M. I. ERSHAD M.Sc. CIVIL ENGR.	<b>DATE ISSUE:</b> APRIL 2022										

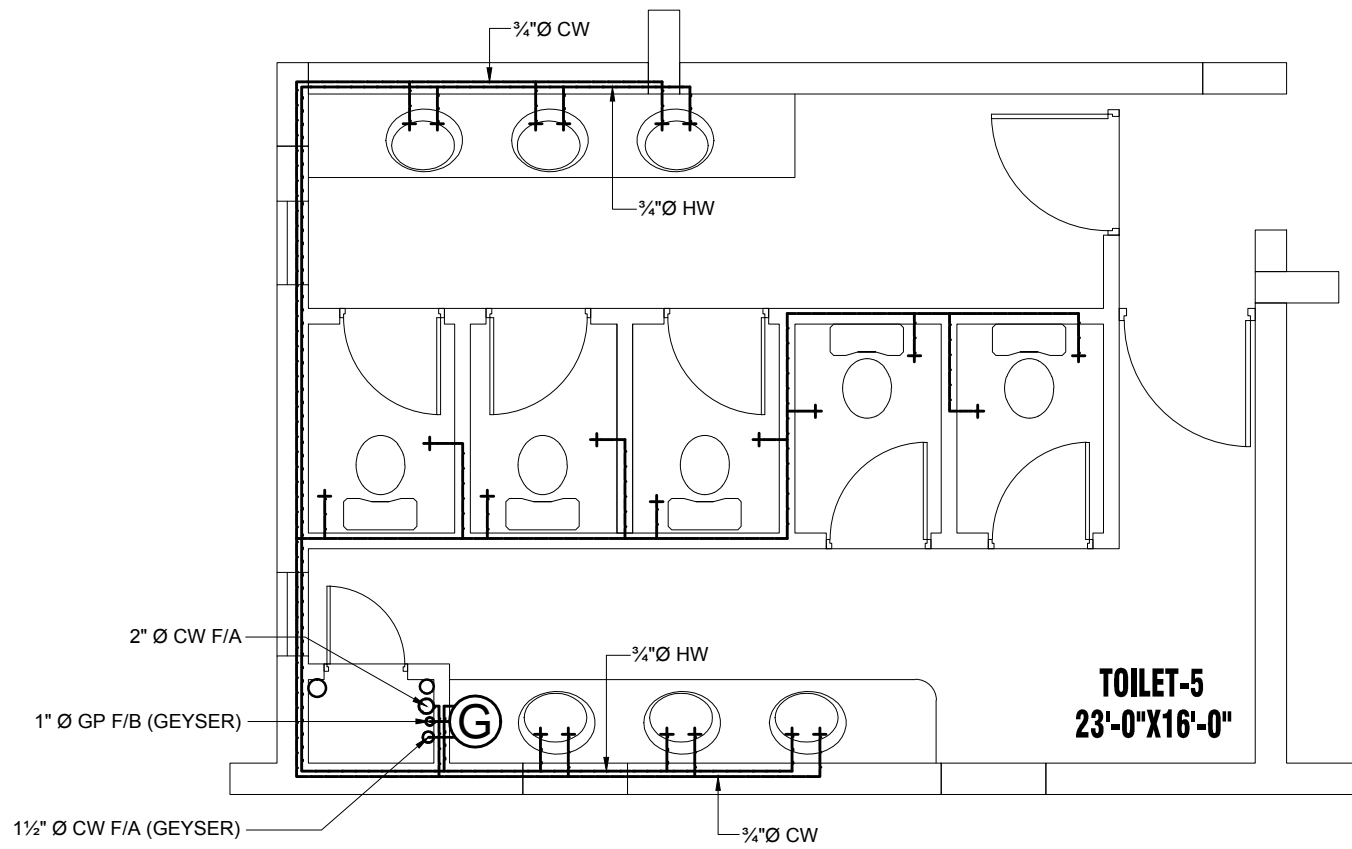


**TOILET-3  
(GROUND FLOOR)**

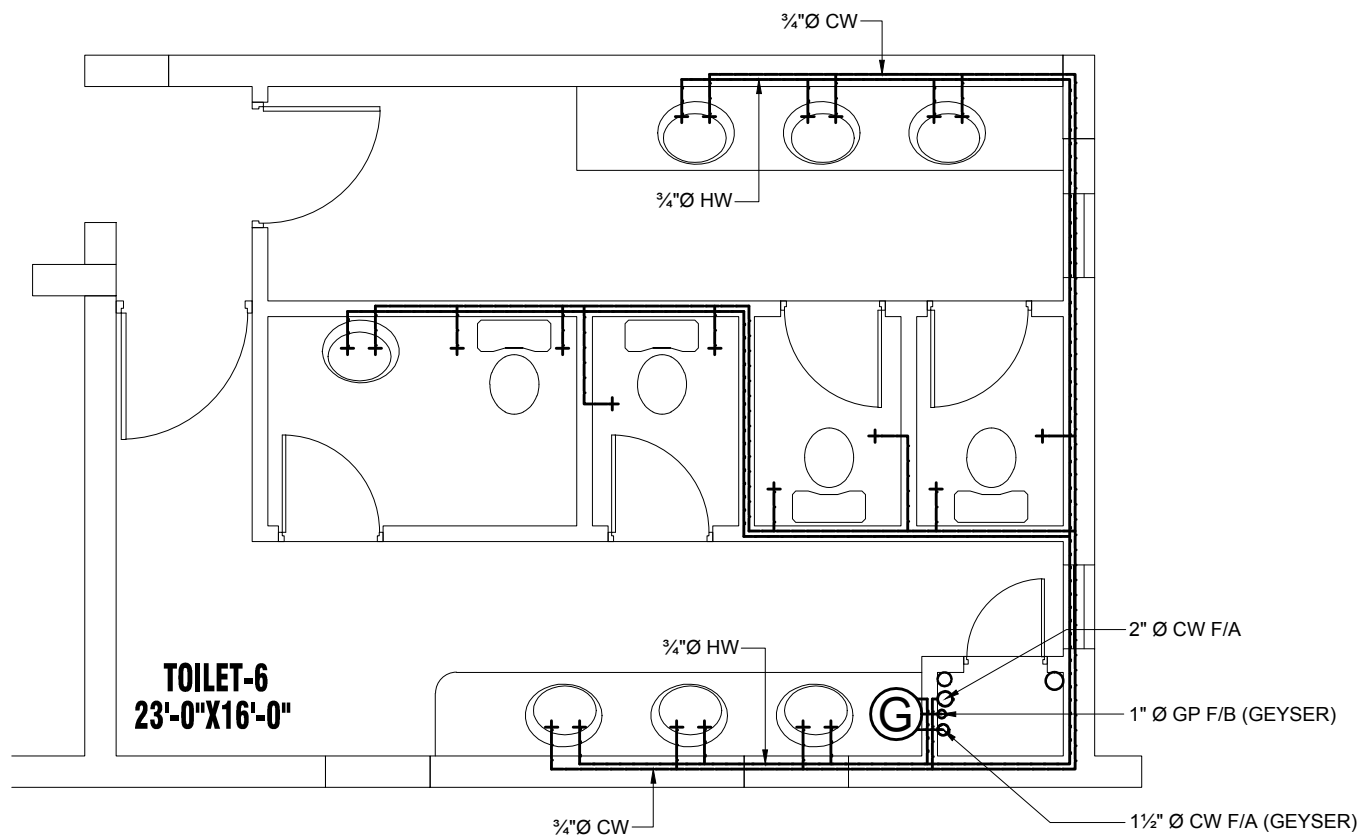


**TOILET-4  
(GROUND FLOOR)**

TENDER DRAWING	REV.	REVISION	DATE		<b>PROJECT</b> QUAID-E-AWAM UNIVERSITY OF ENGINEERING SCIENCES & TECHNOLOGY NAWABSHAH	<b>PROJECT TITLE</b> Software Engineering Department	<b>DRAWING TITLE</b> DETAIL OF TOILETS 3 & 4 GROUND FLOOR (WATER SUPPLY)	<b>RESIDENT ARCHITECT</b> PREERAZA MASROOR RASA SIDDIQUE	<b>ARCHITECT</b> NAQVI AND SIDDIQUE CONSULTING CIVIL & STRUCTURAL ENGINEERS HOUSE #10, 1ST FLOOR, STREET 7, CHAMAN ZAR COLONY, RAWALPINDI SECTOR 6-G/1, ISLAMABAD	<b>ENGINEERING</b> GLOBAL ENGINEERING SERVICES CONSULTING CIVIL & STRUCTURAL ENGINEERS HOUSE #10, 1ST FLOOR, STREET 7, CHAMAN ZAR COLONY, RAWALPINDI	DRAWN BY: MUDASSAR HUSSAIN	<b>DRAWING NO:</b> P-12 SCALE: AS SHOWN DATE ISSUE: APRIL 2022
	ENGR. M.M YOUSAF M.Sc.STRUCT. ENGRG. M.A.EMBA M.ASCE(U.S.A.I.C.E.)											



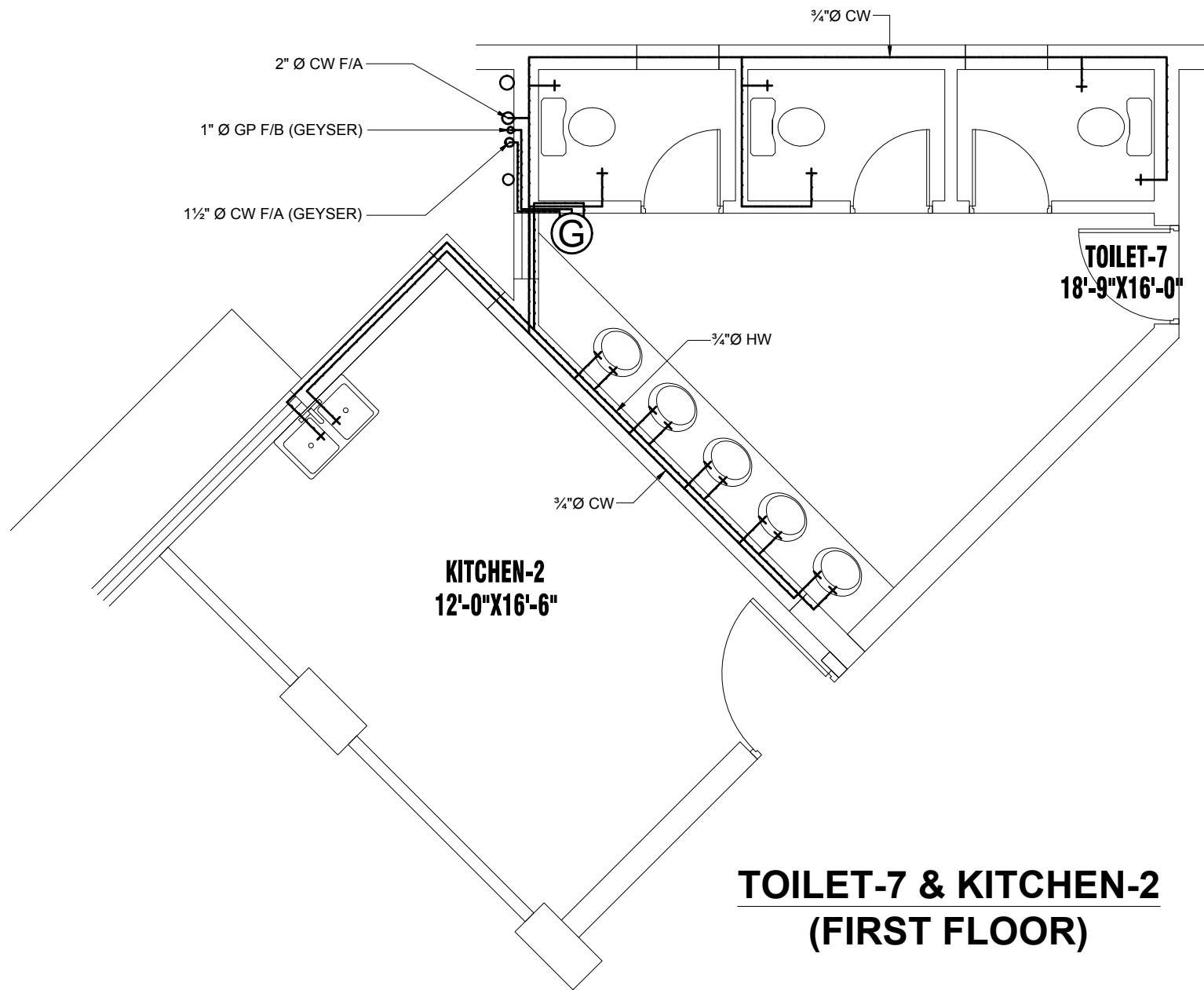
**TOILET-5  
(FIRST FLOOR)**



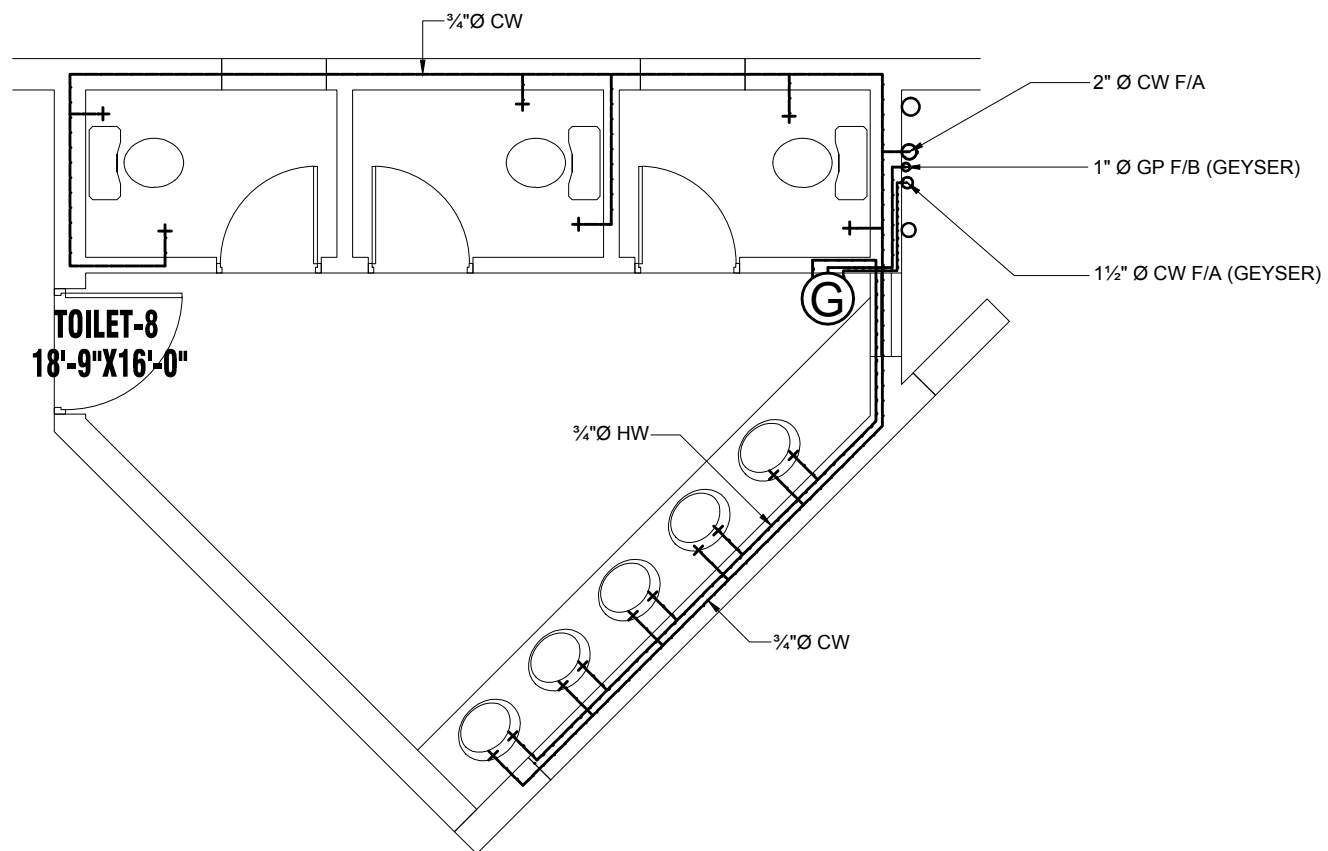
**TOILET-6  
(FIRST FLOOR)**

TENDER DRAWING	REV.	REVISION	DATE		<b>PROJECT</b> QUAID-E-AWAM UNIVERSITY OF ENGINEERING SCIENCES & TECHNOLOGY NAWABSHAH	<b>PROJECT TITLE</b> Software Engineering Department	<b>DRAWING TITLE</b> DETAIL OF TOILETS 5 & 6 FIRST FLOOR (WATER SUPPLY)	<b>RESIDENT ARCHITECT</b> PREERADA MASROOR RANA SIDDIQUIE	<b>ARCHITECT</b> NAQVI AND SIDDIQUIE CONSULTING CIVIL & STRUCTURAL ENGINEERS HOUSE #112, STREET 7, CHAMAN ZAR COLONY, RAWALPINDI ENGR. SKIN:	<b>ENGINEERING</b> GLOBAL ENGINEERING SERVICES CONSULTING CIVIL & STRUCTURAL ENGINEERS HOUSE #112, STREET 7, CHAMAN ZAR COLONY, RAWALPINDI CHECKED BY: ENGR. M.M YOUSAF M.Sc.STRUCT. ENGRG. M.I.EMSWAY M.ASCE(U.S.A.I.C.E.)	<b>DRAWN BY:</b> MUDASSAR HUSSAIN SCALE: AS SHOWN	<b>DRAWING NO:</b> <b>P-13</b> 2022-03-12/25 DATE ISSUE: APRIL 2022





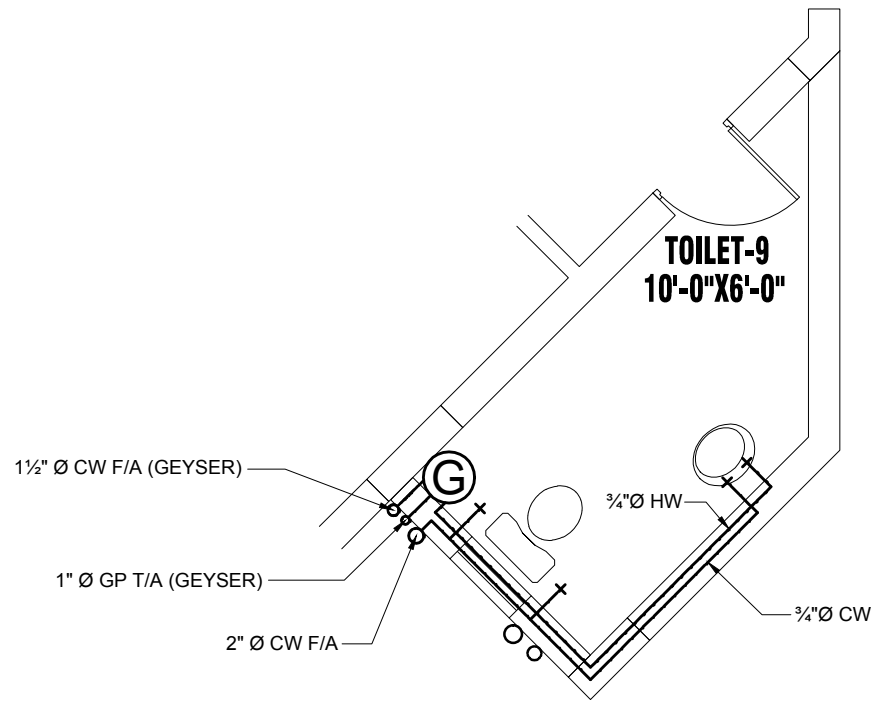


**TOILET-7 & KITCHEN-2  
(FIRST FLOOR)**

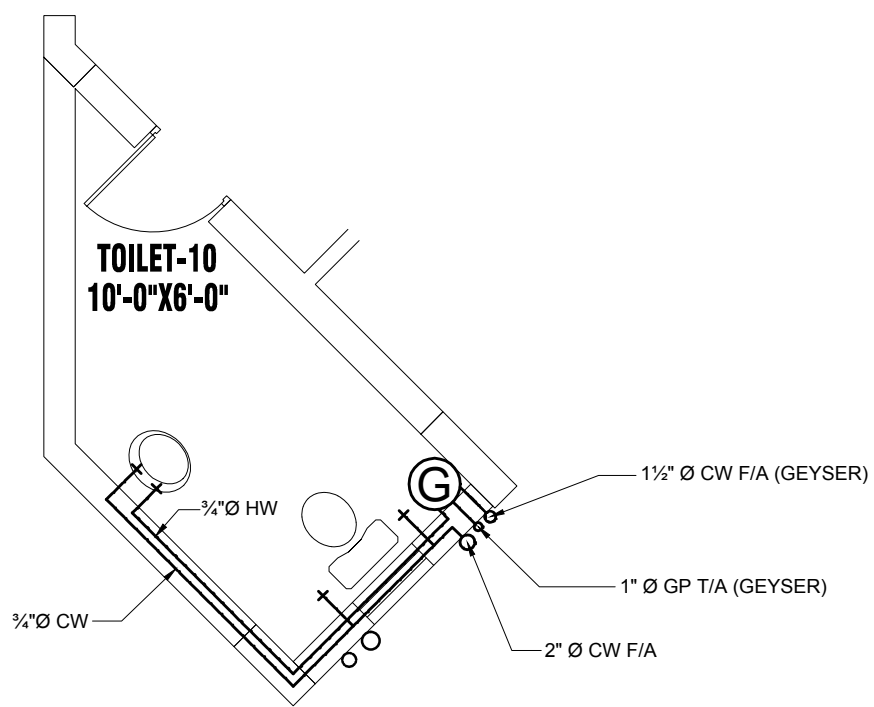


**TOILET-8  
(FIRST FLOOR)**

TENDER DRAWING	REV.	REVISION	DATE		<b>PROJECT</b> QUAID-E-AWAM UNIVERSITY OF ENGINEERING SCIENCES & TECHNOLOGY NAWABSHAH	<b>PROJECT TITLE</b> Software Engineering Department	<b>DRAWING TITLE</b> DETAIL OF KITCHEN-2 TOILETS-7 & 8 FIRST FLOOR (WATER SUPPLY)	<b>RESIDENT ARCHITECT</b> PREERAZA MASROOR RASA SIDDIQUE	<b>ARCHITECT</b> NAQVI AND SIDDIQUE CONSULTING CIVIL & STRUCTURAL ENGINEERS HOUSE #10, 1ST FLOOR, MAIN MARKET SECTOR G-7/A, ISLAMABAD <b>ENGR SKIN</b>	 <b>GLOBAL ENGINEERING SERVICES</b> CONSULTING CIVIL & STRUCTURAL ENGINEERS HOUSE #10, 1ST FLOOR, MAIN MARKET COLONY, RAWALPINDI	<b>FLUISING</b> ENGR. M.M YOUSAF M.Sc.STRUCT. ENGRG. M.I.EMSWAY M.ASCE/US.A.I.C.E.	<b>DRAWN BY:</b> MUDASSAR HUSSAIN SCALE: AS SHOWN	<b>DRAWING NO:</b> <b>P-14</b> DATE ISSUE: APRIL 2022

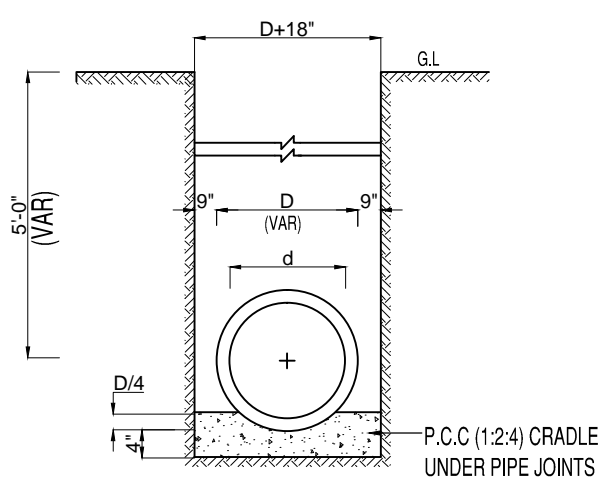


**TOILET-9  
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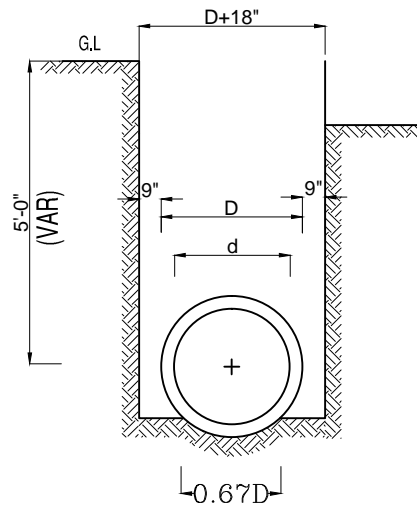


**TOILET-10  
(FIRST FLOOR)**

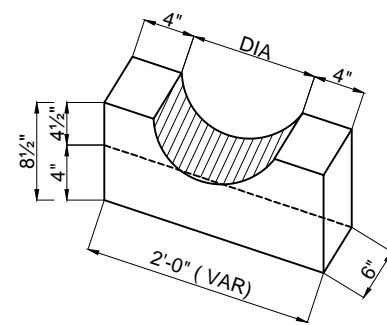
TENDER DRAWING	REV.	REVISION	DATE		<b>PROJECT</b> QUAID-E-AWAM UNIVERSITY OF ENGINEERING SCIENCES & TECHNOLOGY NAWABSHAH	<b>PROJECT TITLE</b> Software Engineering Department	<b>DRAWING TITLE</b> DETAIL OF TOILETS-9 & 10 FIRST FLOOR (WATER SUPPLY)	<b>RESIDENT ARCHITECT</b>  PREKSHADA MASROOR RANA SIDDIQUIE	<b>ARCHITECT</b> <b>NAQVI AND SIDDIQUIE</b> ARCHITECTS & ENGINEERS (PVT) LIMITED HOUSE #10, 11ST STREET, CHANAY ZAR COLONY, RAWALPINDI SECTOR 6-G/1, ISLAMABAD <b>ENGR SKIN</b>	<b>FLUSING</b> GLOBAL ENGINEERING SERVICES CONSULTING CIVIL & STRUCTURAL ENGINEERS HOUSE #10, 11ST STREET, CHANAY ZAR COLONY, RAWALPINDI	<b>DRAWN BY</b> MUDASSAR HUSSAIN SCALE AS SHOWN	<b>DRAWING NO.</b> <b>P-15</b> 2022-03-1275
	<b>CHECKED BY</b> ENGR. M.M YOUSAF M.Sc.STRUCT. ENGR. (M. ENGR) M.ASCE(U.S.A.I.C.E.)											



TYPICAL X-SECTION OF TRENCH AT PIPE JOINT FOR SEWERAGE PIPES (DETAIL-1)

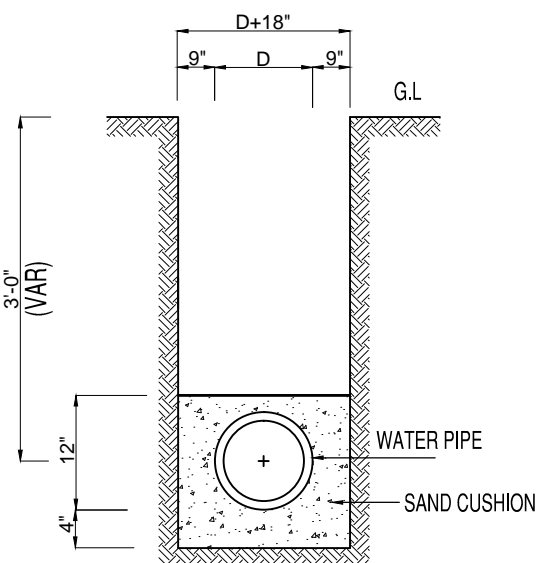


TYPICAL SECTION OF PIPE TRENCH FOR SEWERAGE PIPES AT MID LENGTH (DETAIL-2)

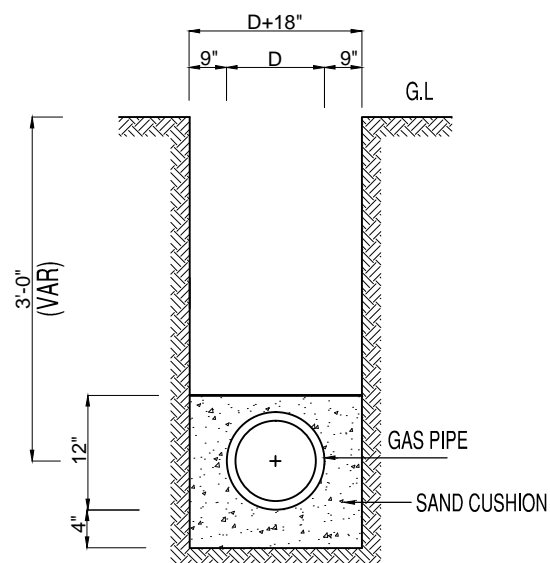


ISOMETRIC VIEW OF PCC (1:2:4) CRADLE FOR SEWERAGE PIPES

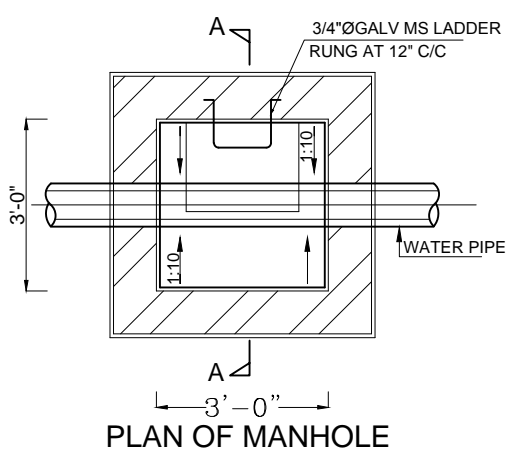
## DETAIL OF SEWERAGE PIPE TRENCH



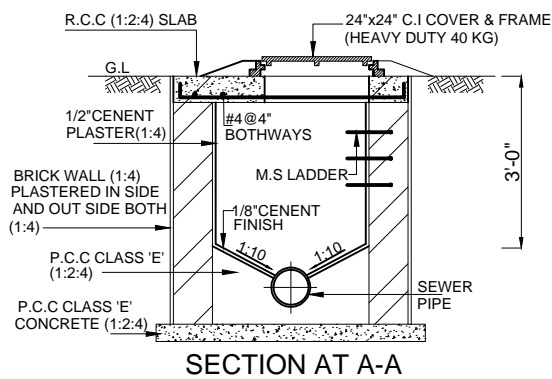
TYPICAL SECTION OF PIPE TRENCH FOR WATER SUPPLY PIPES



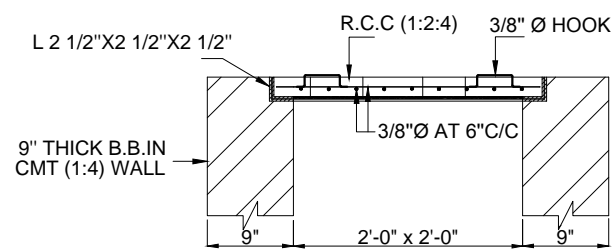
TYPICAL SECTION OF PIPE TRENCH FOR GAS PIPES



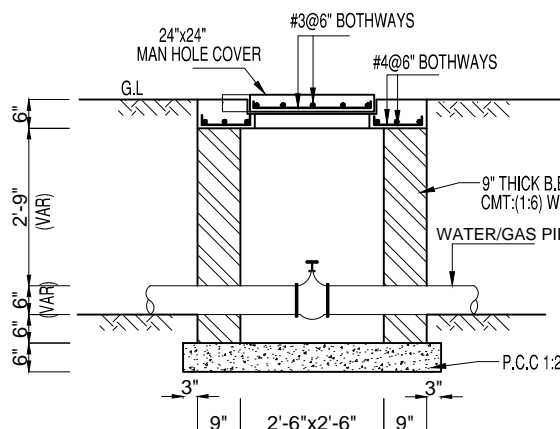
PLAN OF MANHOLE



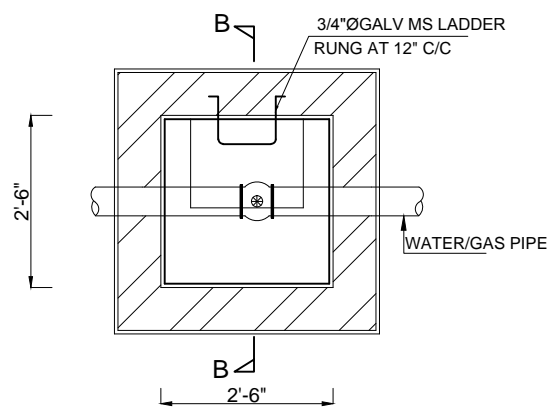
SECTION AT A-A



DETAIL OF R.C.C MANHOLE COVER



SECTION B-B



PLAN OF WATER / GAS CHAMBER

TENDER DRAWING	S.NO.	REVISION	DATE	BY	CHK	PROJECT	PROJECT TITLE	DRAWING TITLE	RESIDENT ARCHITECT	APPROVER	CLIENT	SCALE	DRAWN BY	DRAWING NO.
						QUAID-E-AWAM UNIVERSITY OF ENGINEERING SCIENCES & TECHNOLOGY NAWABSHAH	Software Engineering Department	DETAIL OF MANHOLE & CHAMBER		NAQVI AND SIDDIQUIE CONSULTING CIVIL & STRUCTURAL ENGINEERS HOUSE #10, 1ST FLOOR, STREET 7, CHAMAN ZAR COLONY, RAWALPINDI	GLOBAL ENGINEERING SERVICES	AS SHOWN	MUDASSAR HUSSAIN	P-16
										ENGR. M.M YOUSAF			MUDASSAR HUSSAIN	2022-03-12/25
														DATE ISSUE: APRIL 2022